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Some Observations on Swine Erysipelas.

Discussion on Professor J. F. Craig's Congress Paper.

The discussion on the paper entitled "Some Observations on Swine Erysipelas," prepared by Professor J. F. Craig, M.A., Principal, Veterinary College of Ireland, Dublin, took place at the Session of the N.V.M.A. Congress held in the Lecture Hall, University College, Earlsfort Terrace, Dublin, on the morning of the 30th July. Mr. James H. Norris, Director, Veterinary Research Laboratory, Thorndale, Drumcondra, Co. Dublin, presided.

Before the opening of the discussion, Professor Craig showed and explained a number of lantern slides, comprising the organisms of swine erysipelas or mouse septicæmia; skin lesions of acute swine erysipelas; skin lesions of the mild or urticarial form of the disease; wart-like growths on the bicuspid valve in verrucose endocarditis; and photographs of pigs showing the joint lesions.

Mr. J. O. Powley, Superintending Inspector, Veterinary Dept., Ministry of Agriculture and Fisheries (London) opened the discussion and said: Our thanks are due to the N.V.M.A., and Professor Craig for bringing forward the question of swine erysipelas for discussion at this annual meeting, firstly on account of the annual economic loss which the disease causes to the agricultural community, and secondly because there are certain factors in the epizootiology of the disease which will bear discussion.

It is very difficult to estimate the annual losses from the disease, owing to the fact that it is not scheduled, but that the economic losses are very considerable is undoubted; in fact, in some districts the losses are greater than those occasioned by swine fever.

On this subject, Sir Frederick Hiam, of Cambridge, writes to *The Times* as follows:—

"I noticed in the Press that £295,000 has been paid for slaughtering cattle affected with foot-and-mouth disease. I do not think that many of your readers are aware that a sum far exceeding this amount is lost annually through pig erysipelas, of which amount the pig producer is the loser. During the last three or four years many a smallholder and small farmer has been almost ruined through losing 40 per cent. to 50 per cent. of his pigs with this complaint, which might easily be remedied if the Ministry of Agriculture would only stock vaccine and serum which, if given to the pigs in proper proportions, will make them immune from this disease for six months. At the present time this remedy is only obtainable from the Continent, no one stocking it in England; consequently, when an outbreak occurs half the pigs die before the inoculation can be performed. If this remedy were stocked by all the principal veterinary surgeons, the pig population would very soon be doubled in this country.

"One cannot estimate the annual loss in pigs through this disease; a veterinary friend of mine says it runs into millions. If the loss all over the country compares with the loss in the Eastern Counties, probably he is correct. It is killing the pig industry, as it gets more virulent every year. During the last three years I believe every farmer, smallholder and cottager, has either lost all his pigs or the majority of them, and all pigs that survive a bad attack might as well die, because they never afterwards pay for the food they eat. After pigs have had this complaint they are liable to die suddenly from heart failure, or they are very crampy, one week appearing well, the next so stiff they can hardly move. Sows, too, will not have healthy pigs. I have seen many litters die within ten days of birth through contracting the disease from their mothers. On one small farm within three months fifteen litters were lost in this manner. I have just lost six litters of pigs and the sows have always been healthy, but I have just ascertained that the boar had a slight attack of erysipelas when he was fourteen weeks old, and I find that none of his pigs up to the present have lived.

"This disease in some parts of the country is called 'Diamonds.' It generally appears in its worst form in May and June, when farmers clear out their crewe-yards; the microbe being at the bottom of the manure becomes most active as soon as the yards are cleared. I would advise every one to have his pigs inoculated before removing the manure, and afterwards to have all places thoroughly disinfected."

Whilst the disease, fortunately, does not in this country take on the form of an acute epidemic, some of us are more or less conversant with the well-known Chatteris outbreak in 1905, where the disease raged as an epidemic, killing off about 80 per cent. of the pig population in a somewhat small triangular area. One of the peculiarities of this outbreak was the fact that there were no natural boundaries to the triangle, such as dykes, &c., and yet the area remained quite well defined. In this outbreak also all classes of pigs were attacked indiscriminately, suckers being attacked with the same virulence as fatting pigs.

In attempting to explain this outbreak one must bear in mind that the Chatteris fen country is intensively cultivated, and hence heavily manured, and knowing the ubiquitous nature of the organism, and its power of undergoing a saprophytic existence, it might be suggested in explanation that an intensely virulent type of organism had been imported into the

area to account for the outbreak. In 1905, I understand, much of the manure was imported from London, but for this statement I cannot vouch.

As against the epizootic form of the disease, one recalls those sporadic cases in cottagers' pigs where the poor, unfortunate cottager has had to give up using his sty owing to the fact that he would lose a fat pig each season from swine erysipelas. In these cases one usually found the animals being fed on swill containing all the household refuse such as bread crusts, bacon trimmings, potato parings, &c., and that the swill tub was a seething concoction of putrefaction and fermentation. There would seem to be little doubt in many of these cases that the organism was living a saprophytic existence in the swill tub, but, on the other hand, the organism may have been in the sty, left over from the previous case.

Several years ago I had an experience of the disease in the fruit-growing districts of Worcestershire. It was an exceptional plum year, and the trees in the plum orchards were breaking down with the enormous weight of luscious fruit, with the result that plums were a glut on the market, and not worth gathering. The plums were simply allowed to fall to the ground, and almost without exception the growers brought in strong store pigs, turning them loose in the orchards to gorge on the decaying fruit. The losses from swine erysipelas in these pigs was as high as 10 per cent. in some cases, so that the farmer was inadvertently guilty of throwing good money after bad. The type of disease in these outbreaks was of a mixed septicæmic and urticarial, and many of the recovered animals suffered from a rheumatic arthritis afterwards.

In 1908 I experienced a somewhat curious epidemic on a pig breeding farm in Wiltshire, the disease confining itself almost entirely to the sucking pigs. Anything up to 50 per cent. of the litters died from acute erysipelas, the dams remaining apparently quite healthy. It is difficult to suggest a reason for the disease confining itself to the suckers in this outbreak. Was it that the mature sows were more or less immune to the particular strain of organism, or might it be that the resistance of the suckers had been lowered in some way through some deficient food factor? Because it has been my experience that no one particular class of pig is more susceptible than another. In this connection, I am satisfied that one occasionally meets a very mild type of disease, where the symptoms are very transient—in fact, of such a fleeting character that the attendant would hardly notice or not worry about the mild indisposition. It is quite feasible to suppose that these mild attacks confer an immunity, but leave the recovered animal as a carrier. Had such a condition of affairs arisen in the case stated above, where only the suckers were affected and not the dams?

With reference to the occurrence of the disease, Hutyra and Marek state that the disease occurs everywhere on the European Continent and is usually prevalent in the infected territory in summer, with varied severity in an enzootic form, and not infrequently epizootically. The disease usually appears during the warmer periods, increases in intensity during the course of the summer, and abates at the approach of autumn, whereas during the winter only sporadic cases are observed. This statement of the seasonal occurrence is borne out in Great Britain, and apparently in Ireland.

Discussing the *post-mortem* appearances, one fails to find in any text book or reference work a description of what can be looked upon as a diagnostic lesion in the large bowel, and which is seen only in acute cases of the disease—a lesion which I do not think has been previously described. Apart from my own observations, I am indebted to Captain Wragg, of the Ministry of Agriculture Veterinary Laboratory for much valuable information on this point, and it is hoped that at some future date Captain Wragg will give the profession the benefit of his valuable observations. The lesion consists of a diphtheresis, which is so frequently described as a swine fever diphtheresis. A typical appearance is a decidedly primrose-coloured deposit, in rugæ or patches on the mucous coat of the cæcum and colon, which is of a delicate rose colour, and scattered with punctiform hæmorrhages. Often this deposit is confined principally to the Peyer's patches. In some cases the diphtheritic deposit is stained black, and one would surmise that the black staining arose in many cases after death, being due to the formation of sulphides consequent on putrefaction.

This deposit is very loosely adherent to the mucous coat, and washing will quite readily remove it in many cases. As stated previously, the lesion is very frequently mistaken for the diphtheresis seen in swine fever, the differentiation being that in swine fever the diphtheresis, so-called, is of the nature of a definitely necrotic membrane firmly adherent to the underlying mucous membrane, which, on microscopic examination, will be found to be undergoing necrosis.

Frequently, on *post-mortem* in septicæmic cases, one finds the punctiform hæmorrhagic appearance so frequently associated with septicæmia, and in this connection the kidney is frequently involved, suggesting the turkey's egg kidney which our American confrères associate with swine fever. A useful "tip" (I give it you for what it is worth), and one which I have found readily distinguishes the true turkey's egg kidney of swine fever from the hæmorrhagic kidney of swine erysipelas, is to place the kidney in water for about ten minutes. If the case is one of swine fever the punctiform hæmorrhages will remain as sharply defined as before immersion in the water, whereas in swine erysipelas the hæmorrhages will diffuse and practically disappear.

When forwarding specimens for microscopic diagnosis, Captain Wragg informs me that portions of liver in place of spleen or glands are more satisfactory, as the liver substance does not putrefy so readily.

The treatment of actually diseased pigs should confine itself to absolute rest and quiet; under no circumstances should any attempt be made to drench an ailing animal, as such a proceeding so frequently

ends in sudden death. The most efficacious laxative in the early stages would appear to be calomel inserted into the mouth with a spatula.

I do not propose to discuss preventive inoculation, as doubtless there are many gentlemen present who have had extensive experience, and it will be interesting to hear their remarks.

The question of administrative control has often been mooted but, in view of the fact that the disease lends itself to preventive control by means of vaccination, the need for irksome legislative measures would hardly appear necessary, and the agriculturalist would be well advised to work out his own salvation. (Applause).

Mr. Powley also showed some interesting specimens.

Mr. A. W. NOEL PILLERS (Liverpool) said he had had two or three extremely interesting experiences with regard to animals affected with swine erysipelas in transport. In one case fourteen animals, apparently in a state of good health, left a port in Ireland and arrived at a port in England where two died. The others were just observed for a little while and were then sent to an English town. On the way two more died; they were dead in the truck when they arrived. The other animals were taken out of the truck and the two dead ones were left there and were subsequently removed and examined, first of all for anthrax. The examination for anthrax was negative. The condition of the maxillary glands was exactly as indicated by Mr. Powley. Another of the animals died while it was waiting in the lair. The remainder were then moved towards the abattoir and another was found practically dead in the conveyance by the time it got there. So that, out of fourteen animals which left a port in Ireland, six died on the way to an abattoir in England. That showed how rapidly fatal some of these acute or peracute cases could be. From the veterinary surgeon's point of view, the important considerations in striving to arrive at the cause of death in such cases were that there might be question of the presence of anthrax; there might be a question of overcrowding under the transit orders of the Ministry of Agriculture and Fisheries; or there might be a question of negligence on the part of the railway company or on the part of the person who sent the animals. "In all such cases," added Mr. Pillers, "although one has a dead pig or pigs with which to deal, one wants to be very careful in finding out what is wrong. There is one other little point, and I think Mr. Powley is to be congratulated on it, and that is that he does not advocate control of the disease. I do not know whether that is not a somewhat suicidal policy on the part of a whole-time officer, but at the same time it shows an extremely broad view which, I think, is the proper one."

Mr. POWLEY: In connection with the lesion in the large bowel, I just warn you that you do not find that lesion in every case. The percentage of cases in which you find it will be probably ten per cent. You only find it in the acute cases. You will never find it in chronic cases; and I do not think you will find it in peracute cases.

Major RICHARD FINCH (Veterinary Officer, Preston, Lancs), expressed his appreciation of Professor Craig's paper on such a very interesting and important subject dealing with a disease which was a source of very great loss to farmers, pig dealers and butchers. In his town they got pigs sent from Ireland and by rail from places in the South of England—beautiful animals, costing anything up to £15; and it was quite a common thing to see one dead in the truck. When that happened in a case in which the trucks were well ventilated and were not overcrowded, we came to the conclusion that there did not seem to be any neglect in transit, and then one naturally suspected anthrax as the cause of these sudden deaths. In many cases the lesions were insignificant and one was puzzled to account for such sudden deaths. "I am pleased now to know," added Major Finch, "that in most of these cases it is this acute form of erysipelas; and knowing that, when we see pigs showing the slightest symptoms of ill health of that description, we would naturally advise the butcher to slaughter them immediately. Otherwise they would probably be dead and useless in the course of a few hours. I should like to ask Professor Craig his opinion with regard to the use of such animals for food. We see animals slaughtered and hung up, and, with the exception of hæmorrhages in the skin, the carcases look apparently in very good condition and show no abnormality. But in view of the fact that the organism is found in the spleen and other organs and is present in the blood, it seems to me that the question whether these carcases should be used for food is one that might be further investigated. Pork is a very dangerous food in some respects. We get a little more food poisoning from pork than from beef or mutton; and I have often wondered whether swine erysipelas may not be somewhat responsible for that fact. It is very interesting to hear from Mr. Powley that in cases where the lymphatic sub-maxillary glands are enlarged and gorged with blood these conditions are frequently symptomatic of acute swine erysipelas. I have been always taught that where you got congested and engorged lymphatic glands in a pig, this condition raised a suspicion of anthrax, the condition which is most suspicious being where you get serous infiltration without discoloration of the glands. Serous infiltration is more symptomatic in the pig than in some other animals."

Major A. C. DUNCAN (Cirencester) said he did not propose to try to throw any light on swine erysipelas, but he would like to elicit a little further information, if possible, on two points which, he thought, would appeal to practitioners and to those of them who were local inspectors. The first was the question of diagnosis. Mr. Powley had given them some very useful information about diagnosis which he (Mr. Duncan) would remember and apply. Several cases that had been reported as cases of swine fever he had diagnosed as cases of salt poisoning. In these cases

it was ascertained that a large amount of swill or house refuse had been given, and there was a certain amount of inflammation of the small intestines. Perhaps Professor Craig or Mr. Powley, or some other speaker, would tell him if he was probably wrong. Possibly he was right. The second question he had in mind was the question of treatment, particularly by preventive serum inoculation. They had a good many pigs in the district from which he came. They had not, so far as he knew, suffered from those large outbreaks of swine erysipelas. The cases that occurred were mostly isolated cases. The question of pig keeping was an economic one. As far as he knew, none of the people in his district kept pigs as pets. People kept them for the purpose of making money out of them, and the margin of profit in pig keeping was very small indeed. Just now there was a boom in store pigs, he knew; but, as a rule, the margin of profit was small. And if he suggested to the owner of a number of pigs that he was going to pay him three or four visits and inoculate his pigs as a preventive measure, the owner would not like it, because his charges were not small, and after paying them the man's profit would be reduced to *nil*. He (Major Duncan) would like to know whether it would be proper to suggest to such a man that it would be a profitable thing to him to have his pigs inoculated. In the case of swine fever they had fairly satisfactory evidence at any rate to determine when it was profitable and when it was not, and in some cases they could show the owner that if he would save two or three pigs they would pay for the whole of the inoculation material, and that if he saved more than that number it would mean so much profit. He would like to be able to speak with the same certainty in the case of swine erysipelas. Major Duncan concluded by paying tribute to the value of Professor Craig's paper and to the very helpful character of some of Mr. Powley's remarks.

Mr. R. E. Glover (Cambridge) said that Major Duncan had raised a very important point in connection with the question of swine erysipelas, and that was the use of serum. He thought that both Professor Craig and Mr. Powley rather deprecated the use of serum. "That has not been our experience," continued Mr. Glover. "We have, fortunately, been able to investigate one or two acute outbreaks of swine erysipelas and we have used serum. In these cases the pigs had been dying within from twenty-four hours to three days after showing the symptoms and none of them, or very few of them had survived. We have found that a comparatively small dose of our highly-potent anti-swine erysipelas serum injected at a time when the pigs are showing a high temperature has had miraculous results. Within a few hours the pigs have been on their feet and the following day they have been quite cured, showing no signs whatsoever of the disease. We have found that a dose of 20 cc. up to 50 cc. has been quite sufficient to bring about this result. I would suggest that certainly in the case of valuable breeding sows it is very well worth while to use a dose of serum to deal with an attack." (Applause).

Mr. James Dodd (Sligo) said that, like Mr. Glover, he had some experience within the previous two months of serum treatment. There were three outbreaks in three different breeding establishments about seven miles apart. He had not any serum at the time, but he got it through Mr. Norris. He injected every pig with a double dose of up to 30 cc. one day and on the following day gave a dose of 20 cc. Two of the pigs recovered. Another pig, in young and within about a week of farrowing, was very bad. He diagnosed the case as one of swine erysipelas and gave her a dose of 30 cc. serum. He saw her again next day and gave her a dose of 10 cc. The animal in the meantime got nothing in the way of medicine, but plenty of milk was left to her and he gave instructions to give her castor oil with it. For six or seven days she remained in a kind of comatose condition. She would only move when asked to move. About two days before she farrowed the symptoms disappeared. She had her first litter of twelve and there was one dead in it. "That pig," continued Mr. Dodd "is suckling the young now and is in absolutely good health." Mr. Dodd gave another experience—the case of a large white Ulster sow within a short time of farrowing. He diagnosed her sickness as swine erysipelas and gave her the same treatment as in the other case. She farrowed before the symptoms had passed over and had a litter of thirteen, of which six lived and seven died. She was now all right, a fact which he attributed to the serum treatment.

Mr. F. T. Trewin (Watford) said he would like to ask Professor Craig a question with regard to vaccination. They had experienced a considerable number of outbreaks of swine erysipelas in their district in Hertfordshire, and he noticed that they got recurring outbreaks on the same premises each summer. They had recently adopted the serum treatment wherever they had outbreaks and, he thought, with some considerable success, both as regarded the animals that were affected and also the in-contacts. "But," continued Mr. Trewin, "what I am anxious to know is why, instead of giving a protection by serum for a fortnight, we cannot also obtain a more lasting immunity by giving the pigs serum and vaccine treatment. I have made inquiries in this subject and I have been told that vaccine is not sent from the laboratories, because they do not consider that it is altogether free from risk. I should like to know from Professor Craig if he could tell me what that risk amounts to. Owners naturally are quite willing to spend money on serum if they can get some permanent immunity, but if it only lasts a fortnight they can scarcely be asked to bear the expense. I have found that where I used serum on the in-contacts after an outbreak they remained free for a fortnight or three weeks and that after that we had some more losses. So that it appears as if, when serum only is used, the treatment has to be repeated after that interval. I should like to know what the losses are, if there are any, after the use of vaccine."

Mr. H. C. Irvine Kelly (Portadown) said he got quite a number of isolated outbreaks of swine

erysipelas. In one case he tried fifteen pigs in an affected farm, first with serum and then with vaccine. Only one pig showed symptoms sometime after the vaccination, and it recovered. The great difficulty was that the expense was too much. The owner of the pigs to which he had referred, who was rather an up-to-date gentleman, was clamouring for the production of a cheaper material.

A member said the price at present was 2s. 8d. for a 10 cc. dose.

Mr. Kelly said he had also used vaccine alone and there were no bad results from it. Mr. Finch had spoken about Irish pigs being dead when they landed. He did not understand Mr. Finch to say whether there were any skin lesions of swine erysipelas present in those animals or not. He (Mr. Kelly) had found it quite common, especially in the case of white Ulsters and well-bred or in-and-in bred pigs, for pigs to develop skin lesions and also very bad diarrhœa which, he had found, were due to dietetic causes. As regarded treatment, he was afraid that his clients were better up in pig practice than most clients. He had found that they had given their pigs laxatives such as jalap and had then reported the cases to him. He gave the animals salicylate of soda, and they recovered. He had found that in his district, pigs of about 112 lbs. were most susceptible to the disease; and he found also that if they could keep them alive for a period of from four to six days and left them alone, they recovered without any treatment whatever. So that it must be a very mild form of the disease.

A MEMBER said he had had some experience of an outbreak of swine erysipelas, but it was a very mild one. As a matter of fact, it was so mild that it was very hard to say what the trouble was. They found that it was swine erysipelas. The owner was a rather intelligent sort of man and he had a talk with him as to what he should do, and he (the speaker) suggested that they should inject his pigs with serum. As regarded the question of expense, he had found that if he used Addison's serum to inoculate about fifty pigs it would cost him £4 more than by using the serum which he did use, and which he got from Antwerp. Concerning a couple of sows which he injected with the serum, they were lame when he injected them, with chronic lameness, due to the disease. After the injection the lameness disappeared in the case of one of them, but persisted in the other. He would like to know from Professor Craig whether that pig was still a source of danger to the other pigs and whether or not it would be advisable to knock her on the head. He had told the owner that he thought it was advisable to do so, but the owner had not done it. With regard to the skin lesion, he had some opportunity recently of observing it, because a veterinary surgeon in the neighbourhood had it in his finger. "I have been wondering," he concluded amidst laughter, "whether he is a source of danger to other pigs."

Professor FOLMER NIELSEN (Copenhagen): As to the use of serum, in Denmark we have a lot of swine erysipelas during the months of July, August and September especially; and for many years, I believe for the last fifteen years, I have been using a lot of erysipelas serum, and with very good results. I should say that in Denmark nearly every case of swine erysipelas which comes under the notice of the veterinary surgeons will be usually treated with serum—whether they are sick animals or animals which have not yet been seized with the sickness. All veterinary surgeons in Denmark will, I believe, agree with the opinion that the swine erysipelas serum is the most effective remedy that we have.

Mr. JOHN J. O'DONOVAN (Dublin) said that as regarded the question of diagnosis, he fancied that practically all pigs, when anything was wrong with them would show this reddening of skin, and from this symptom alone, one would not very quickly make a perfect diagnosis. Professor Craig, in his paper (page 174) cautiously stated that "as a rule the diagnosis is made by a *post-mortem* examination." Very often in the Dublin market on a Thursday morning in the winter time, when it was frosty and cold, they would see a pig lying down and showing all the symptoms that were common in swine erysipelas—the ears and the abdomen and the axilla would be red. And when they would be beginning to think that it was very seriously affected that pig would get up and walk around. When the diagnosis was made by *post-mortem* examination it was certain, but it might not always be definite in other cases. A pig, when sick and suffering from constipation, would show somewhat similar symptoms as in the case of erysipelas, it would have skin discoloration also. He thought, therefore, that these conditions were present in most cases of sickness in pigs and occasionally when there was no sickness. Hence, one had to be careful in making an *ante-mortem* diagnosis.

Mr. WILLIAM TWEED (Sheffield) asked whether swine erysipelas was communicable to man by inoculation. He had seen a case recently where a man had pricked his little finger in cutting up an acute case of erysipelas. He developed a red skin lesion on the finger. The hand did not swell much and there was some irritation in it. The red spot gradually spread right across the back of the man's hand. There was no swelling of the lymphatic glands. He had noticed another case reported in *The Veterinary Journal* a short time ago in which a veterinary surgeon contracted a similar lesion to the above, who had made a *post-mortem* examination of a pig, stated that the characteristic point was that there was no swelling of the lymphatic glands of the arm. With regard to the question of swine erysipelas occurring in the transit of animals, he knew one large pig dealer into whose place fat pigs were brought and where they were slaughtered, and very often in a consignment of thirty or forty pigs they would get one or two cases of swine erysipelas showing the "red soldier" characteristic when put in hot water.

The CHAIRMAN (Mr. Norris) said that before Professor Craig replied, he would like to make a few remarks himself. Swine erysipelas was prevalent in Ireland and it was of considerable economic importance, of probably more importance, taking one year with another, than swine fever. "We find it here," continued Mr. Norris, "in sporadic

outbreaks. We never have, as far as I am aware, epizootic outbreaks such as you have experienced in England in the Cambridge district. The types met with in Ireland are of three kinds. The most common type is the mild urticarial form. That is very common. You will see it nearly every summer in every district, and, as a rule, it results in recovery. The pig is ill for three or four days—very ill, and these skin lesions come out and fade away and the pig resumes its normal health. A large proportion of these cases show joint lesions; and a smaller proportion again ultimately die from chronic heart lesions when the pig is a couple of months older. The second type met with on certain farms is the acute form. That is not, as a rule, very common. I have seen as many as five pigs dead on one farm. But you may not meet with a case like that again for two or three years or perhaps longer. The other form met with is characterised by the usual symptoms of valvular heart disease. These symptoms are very typical of venous congestion. With regard to the treatment in the urticarial form and as to whether it is advisable to adopt any form of treatment or not, I agree with Mr. Powley that the simplest and most successful treatment is masterly inactivity. Leave the animal alone. Otherwise, you will do more harm than good. Another point which has been brought out here is of considerable importance, and that is as regards the sudden deaths of pigs in transit. We pretty frequently find animals coming from all over the country dead at the railway termini in Dublin; not infrequently we find a fat pig or perhaps two or three dead in the waggon. And they have this skin discoloration. I must say that I think it would be extremely foolish to go on skin discoloration in pigs as a diagnosis for anything. You must go further with your examination. (Hear, hear). Another point which was brought out by Major Duncan was in reference to salt poisoning. He seems to have had considerable experience of salt poisoning outbreaks, and he thinks that salt poisoning may be confused with acute swine fever or acute swine erysipelas. I personally have had very little experience of salt poisoning. I have had one or two cases where I was fairly sure that it was salt poisoning, and in most cases there was no difficulty in making a diagnosis. You had inflammation of the stomach and small intestines in the salt poisoning, accompanied by epileptiform seizures which you do not get in swine fever or swine erysipelas. If you get epileptiform seizure in pigs, as a rule you may look for some irritation in the stomach and bowels. Mr. Powley did not advocate legislative control. In that I agree with him. In this country the pigs are owned in small numbers. An owner has generally one or two; and a herd which would exceed ten would be regarded as a large one. As a rule farmers have not more than that number; and there is no place in the Free State that I am aware of where they go in for pig farming on a large scale. Our problem—and of course it is the problem in other countries too—is what to do. Legislative control is impossible. I do not see how it could work or whether it is necessary. I think the thing to aim at is prevention. And the point is: Is it economic to employ veterinary surgeons to apply serum and vaccine which will give a lasting immunity? That is a question of cost. I think the owners would rather take the risk than face the high cost of the serum and vaccine. So that we are up against a dead wall, so far as any practical method of prevention is concerned. The question of diagnosis was mentioned. I should like to emphasise again that, although we should be suspicious of swine erysipelas in cases of sudden deaths, with a generalised condition of skin discoloration, it would be a great mistake to accept that condition alone, as indicating swine erysipelas. I see Professor De Blieck has arrived. We have been discussing swine erysipelas, Professor De Blieck, and we should be very glad if you would give us some information on your experience in Holland concerning vaccination against swine erysipelas."

Professor De Blieck (Utrecht): I apologise for not being earlier. Of course this question of swine erysipelas is very interesting and very important. We have in our country years and years experience of vaccination. Twenty-five years ago, I have learned, swine erysipelas was very rare in England and Ireland and Scotland, but I see from the paper of Professor Craig that it has now increased. What is the cause? I think one way in which the infection is caused is by mice, by the *Bacillus murisepticus*. I do not know whether that is found very much in the British Isles. Another cause of the spreading of the disease is vaccination by living cultures. As regards immunisation, my experience in Holland has led me to the conclusion that the best method for securing immunisation is that introduced by Lorenz, that is, serum and vaccination with living cultures. Vaccination with dead bacilli has been found of no effect. In dealing with infected herds, many veterinary surgeons use only serum, because the pigs are exposed to the natural infection. That method, in the majority of cases, gives sufficient immunity for six and seven months and more. In districts where the disease occurs every year the farmers go in for preventive vaccination of non-infected herds, the serum and the living culture being used because there is no natural virus in the place at the time that the vaccination takes place. The vaccines and the sera have to be controlled. Sera coming last year from different factories in Germany and Holland were found to be quite different in quality. It is not possible to standardise the sera so exactly as the anti-toxic sera, but still it is possible to get a sufficient standardisation by the method worked out in the Frankfort Institute. Living cultures, too, in trade are quite different in their degrees of virulence. I do not think it is necessary to have a very virulent culture; but if the culture is too much attenuated you do not get sufficient immunity. Professor Craig referred to investigations made by Japanese workers who used cultures to which Lugol's iodine solution had been added. I made some experiments with material of a similar kind on mice and pigeons, but with negative results. Still, I cannot say that the results in Japan are not

reliable. Experiments as regards the immunisation of pigs against swine erysipelas are very difficult in the laboratory, because it is very difficult to infect a pig experimentally with swine erysipelas. It sometimes happens that a culture which is veryvirulent for mice can be given to pigs up to 100 cc. subcutaneously without giving them a deadly infection.

I noticed in some experiments I made in trying to immunise pigs by the bacteriophage of de Herelle that simultaneous vaccination by the Lorenz method was absolutely necessary to give a sufficient period of immunity. We know that the possibility exists that these living cultures can be the cause of spreading the disease, and therefore I think that they should only be used in districts where the disease is prevalent. Here you have not got so much swine erysipelas as we have in our country, where for years and years we have had a great deal of it. And here, I think, you have to make experiments with killed bacilli, with a view to discovering a method of immunisation without the use of living cultures. They are everywhere making experiments in that direction.

The Reply.

Professor Craig, in bringing the discussion to a close said: I congratulate myself, not upon the paper, but upon the discussion; I think we have had this morning one of the best of examples of what a discussion should be. (Hear, hear). It has not been in the nature of carping criticism. It has brought out what I wanted to bring out and that was the experiences of practitioners and others who are interested in pig practice and in this infection of swine erysipelas. I think we have got a great deal of information this morning; and it appears to me that swine erysipelas exists to a much greater extent than we have realised up to the present and that perhaps the losses which are sustained from the infection in certain districts are much greater than those which arise from swine fever. There is no doubt that there are many cases of the infection which are not brought to the notice of the practitioner or which are not recognised. It is not so easy to recognise acute cases during life. And that is our trouble. Although skin lesions in acute cases are regarded as characteristic, still there are many cases in which discoloration is neither evident nor characteristic. I have not very much to which to reply because I think the discussion itself has cleared up a good many points which have been raised by a number of the speakers. I should like to say, in connection with Mr. Powley's remarks, that the spirit which he showed in carrying out the task imposed upon him was of a nature that one would like to see in discussions upon papers at future meetings. (Applause). His address has been by way of amplification. He has added to our knowledge and one of the most interesting things that he has done has been to exhibit two beautiful *post-mortem* lesions, one of swine erysipelas and the other of swine fever. Certainly, if the condition of the intestine as seen in Great Britain is as common as Mr. Powley makes it out to be, I do not think that such a condition is so commonly seen in this country; at any rate, I have not met with it. With regard to the exact nature of the membrane, it would be impossible to determine that without a microscopic examination. But there are macroscopic details of the swine erysipelas lesion which would agpear to be readily distinguished from the swine fever necrotic lesion, *e.g.*, by the readiness with which it can be detached. I agree with Mr. Powley and with the various speakers that it is only in some cases that treatment of this disease can be applied with a view to the reduction of losses; because in this country, at least, the herds are small—there may be only one or two pigs in a herd, and one or other of them is dead before the diagnosis is made. Major Duncan referred to the question of diagnosis and treatment of salt poisoning. Here I am relieved in the way of reply because Mr. Norris has taken up the whole question. I certainly agree with Mr. Norris that there is no difficulty as a rule in distinguishing the two diseases. And certainly one would not expect on *post-mortem* examination to find that the inflammatory reaction would be confined to the small intestines in a case of salt poisoning. The question as to the prevention of the disease as it is met with in practice is a difficult one to solve at times, because essentially it is an economic question. It is problematic whether the preventive measures will not cost more than the losses which are sustained. As I pointed out, in certain countries, like Belgium, the serum and vaccine are given free by the State for preventive application. But it is hardly likely, until we know a great deal more of the losses and the extent and permanence of this disease, that the State here will intervene. Mr. Glover remarked that we seemed to have some misgivings as to the effect of serum in the treatment of cases actually showing symptoms of the disease. That is not the case. The misgiving that we have in connection with the matter is two-fold. First of all, in the early stages it is very difficult to recognise that the disease is present, because the symptoms are not by any means of such a nature that you can exclude a number of other affections; and, in the second place, we know that some pigs recover, and the difficulty is to make sure whether the recovery is due to the use of antiserum or to other treatment. Mr. Trewin referred to the use of serum in the prevention of the disease and he asked why it is that vaccine is not being recommended to a great extent. I think that that question was well answered, perhaps unconsciously, by Professor De Blieck, to whom I am greatly indebted. The great trouble with the vaccine is to ensure that it is more or less innocuous and yet sufficient to stimulate the production of active immunity, while at the same time it is not likely to be the means of spreading the swine erysipelas. That is the trouble that one feels in connection with it. But I think there should be no misgivings on that point where serious annual losses are being incurred. It is certainly hopeful when it is suggested that serum and exposure to infection will set up active immunity. That may be a solution

of the trouble, a solution of the problem as it appears in practice. Mr. Tweed asks whether swine erysipelas is seen in man as the result of ingestion. I do not know of any definite case of the kind. I remember that sometime ago it was stated in one of the medical journals that a case had been found in which organisms similar to those of swine erysipelas have been discovered in the blood of a man. But the investigation was not worked out to such an extent as to show that these organisms were those of swine erysipelas, nor was it shown that the man had been eating pork at all prior to the illness from which he died. A point has been raised with regard to the destruction of the pigs in the early course of the disease. One has to make sure that the pigs are affected with swine erysipelas in such instances. In addition to that, it has to be remembered that the probability is that if they are killed they will be a dead loss, because very often, although no skin lesions are apparent before death, they become evident and very distinct after scalding; and in such cases the pigs would be condemned by the Inspector on the *post-mortem* examination. One need not say anything about the action that would be taken upon meat inspection, because we have a demonstration this afternoon, during which, I presume that question may be raised. As we all know, according to the Scottish practice in connection with meat inspection, all cases of acute swine erysipelas are condemned. I do not know that there were any other questions raised to which I need refer; I think that, as a matter of fact, during the course of the discussion various speakers have answered questions which have been raised by others, and there is no need for me to emphasise the points which have been raised and the replies which have been given. (Applause). I will only say, in conclusion, that I am very pleased that I was persuaded to write this paper because it has led to a discussion which has added to our knowledge of the prevalence of the disease, the conditions under which it arises, and the difficulties which are met with in its control in this country.

The CHAIRMAN: We are very much obliged indeed to Professor Craig, and to those who took part in the discussion, which was an excellent example of what a discussion should be, and to Mr. Powley for bringing these fine specimens all the way from London and giving us a great deal of original information.

The Governors of Ellesmere College, Shropshire, have decided to proceed with the building of the Memorial Chapel at this well-known Public School. The Chapel is intended as a Memorial to all old Ellesmerians and especially those who fell in the War of 1914—1918, and it has been designed on broad lines by Sir Aston Webb, the famous architect, to accord with the present School Buildings. The Ceremony of laying the Foundation Stone by Sir Offley Wakeman, Bart., the Custos of the College, has been arranged for September 30th (with a preliminary Festal Service for St. Oswald, the Patron Saint of the College, on the previous evening), and a number of Church dignitaries, including the Bishop of Lichfield, will be present and officiate at the actual laying of the Stone. The Governors appeal to all old Ellesmerians to be present at the ceremony, not only as a tribute to their old School, but to say "Vale" to the Rev. T. H. Heaworth, M.A., the present Headmaster, who is retiring after a lengthy and useful service to the cause of education. Full details will be gladly supplied by the Secretary, Ellesmere College, Shropshire, and contributions to the Building Fund acknowledged.

The Royal Society of Medicine: Section of Comparative Medicine.

The above Section has again experienced a successful Session—the fourth in its history and the second year in succession under the Presidency of Major F. T. G. Hobday. It is not too much to say that the interest taken in the doings of this section is steadily increasing and it is of some moment to observe that this remark applies particularly to members of the medical profession.

The meetings, without exception, have been exceedingly well attended and compare more than favourably with those held by other Sections of the Society. The average attendance for the year has been 45, a gratifying result to those who have fostered the Section in its infancy.

The papers read before its meetings have been well up to the average and the discussions have invariably been well sustained.

A list of papers read and their authors will demonstrate clearly, to those who have been prevented from attending, the wide range of subjects brought forward for discussion and the eminence of the essayists.

PAPERS READ BEFORE THE SECTION OF COMPARATIVE MEDICINE: SESSION 1925-1926.

October 28th, 1925: Dr. W. H. Andrews, "Some Recent Advances in our Knowledge of Plant Poisoning." November 25th, 1925: Dr. Carey F. Coombes, Dr. Hadfield and Mr. G. E. Henson, "A Note on the Endocarditis of Swine Erysipelas and its Relation to Endocardial Lesions in Man." January 27th, 1926: Professor R. H. A. Plimmer, "The Relation of Quantity of Vitamin B to quantity of Food"; and Professor J. C. Drummond, "New Facts Concerning Fat-soluble Vitamins." February 24th, 1926: Dr. P. H. Manson-Bahr, "The Relation of Wild Animals to Certain Diseases of Man." March 24th, 1926: Dr. J. F. Halls Dally, "Ultra-violet Radiation in Man"; and Mr. E. Middleton Perry, "The Therapeutic Effects of Ultra-violet Rays and High-frequency Currents in Animals." May 26th, 1926: Professor G. H. Wooldridge, "Some Diseases of Meat and their Relation to Public Health."

The new Session commences in October and it is hoped that under the Presidency of Sir D'Arcy Power, who is so well known to many of us, this will be even more successful than its predecessors.

Although this is only intended to be a brief survey of the activities of the Section of Comparative Medicine, one cannot pass over the death—so lamented by all the members of the Society—of Sir William Leishman. Sir William had consented to accept the Presidency of the Section, when he was taken suddenly ill and removed from our midst. Sir William's death occasions a great loss, not only to science in general, but to our profession in particular.

The Session terminated with a private dinner given by the retiring President, Major Hobday, when some sixty members attended—a very happy thought on the part of Major Hobday and a fitting conclusion to a successful term of office. G. W. D.

Meat Inspection in the Argentine.

By Dr. Juan E. Richelet,
Attaché to the Argentine Legation, London.

The progress that has been achieved in the Argentine in regard to the inspection of meat was set forth in the papers read by Colonel T. Dunlop Young and Mr. A. R. T. Woods, at the Imperial Sanitary Congress held in London last month.

The organisation of the services for the inspection of cattle and meat in the freezing plants has been an object of the greatest concern to the Government, which has adopted the most modern and scientific methods without regard to the country of origin.

As a result of the increase in the exportation of chilled beef into various countries, the most competent scientific men were sent to Argentina to investigate the question of what guarantees were offered by the veterinary service charged with the work of inspecting meat for exportation. These scientists visited the freezing plants and other establishments and they expressed the opinion that the Argentine service was excellent. In 1913, Colonel Dunlop Young, Chief Inspector to the Smithfield Market, visited Argentina, and brought back important findings to the London City Council. In 1914, Professor J. Bergman, Chief of the Stockholm Bacteriological Institute, visited the freezing plants and ranches and on his return he published two interesting books dealing with the veterinary services. During the war, Dr. Spencer Low, who was commissioned by the British Ministry of Health, and Dr. Martell, from France, studied the organisation of the veterinary service, and they expressed the opinion that the praises bestowed upon the Department by the Argentine Ministry of Agriculture were amply justified. In 1923, Professor Neumann, from Germany, and Professor Leclainche, from France, paid a visit to the Argentine Freezing Works, while the late Sir S. Stockman also visited Argentina and on his return to this country expressed his high approval of the system of inspection. The Ministry of Agriculture realised that the veterinary service deserved attention. It has done all in its power to perfect the processes of inspection of the freezing plants and has adopted all the latest scientific discoveries.

The meat inspection service in the freezing plants and slaughterhouses, and also the work of attending to the hygienic and health conditions of these establishments, were entrusted to professional veterinary surgeons. All the factories in which foodstuffs are to be inspected, whether the products are destined for exportation or for home consumption, are also under the care of veterinary surgeons. The rules governing the sanitation of the cattle, the inspection of meat, and the health of the workers, have been drawn up by the most competent veterinary surgeons in the country. As can be seen, the position these men hold is a unique one in their profession, and it is to them that the perfection of the veterinary services is due. Few countries have succeeded in improving their meat inspection departments to the same degree, simply because they have not left the direction of them to the veterinary profession which, owing to the nature of its studies, is the only one able to understand and regulate these services.

In Argentina, all the cattle killed for exportation are inspected. There are 200 veterinary surgeons and 300 assistants employed at this work. Moreover, more than 90 per cent. of the cattle killed for home consumption are inspected by the veterinary surgeons in the public slaughterhouses. In the federal and provincial systems there are laws which demand that each slaughterhouse shall have its own veterinary inspector. The killing of animals for human consumption is concentrated in the slaughterhouses of the large cities, private slaughterhouses being prohibited. The manufacture of pork, fat, tripe, preserves and tallow is subject to veterinary inspection, whether the products are intended for exportation or not.

The inspection services of the freezing plants are paid for by a tax imposed on the companies by the Ministry of Agriculture, as follows: 30 Argentine centavos for each ox killed, 10 centavos for each sheep, and 3 centavos for each pig. On the manufacture of preserves and fats the tax is in proportion to the value of the products. In the small towns and large cities the tax is collected by the municipalities, and it varies a great deal from one place to another. The manufacture of frozen meat or of products of animal origin in exporting establishments, or in those having relations with other provinces, or in those that are under federal jurisdiction, is subjected to the strictest vigilance by inspectors appointed by the cattle department for the various factories, as required by the laws of 4th October and 15th November, 1906.

The inspection thus established may be considered to be complete, and it begins with the arrival of the animals, whether these come by train from a distance or from the immediate neighbourhood. They are examined before they are turned into the pastures. When the animals are to be slaughtered they are again examined, and any that show the slightest symptoms of disease are rejected. The slaughtering takes place under hygienic conditions, according to the regulations in force. A thorough macroscopic and, in cases of doubt, microscopic examination is then made, and all meat which might be prejudicial to the public health is confiscated. The meat thus rejected is transformed into tallow, or used for purely industrial purposes, and is worked up in a special department under the supervision of a veterinary assistant. Meat which is not sufficiently fat, or which has any small contusion, is not allowed to be exported. Animals which die in the pastures or in the establishments are subjected to a searching *post-mortem* examination, and a bacteriological examination of the blood is made in the laboratory, which every sanitary service possesses for the purpose of scientific investigation.

The prepared products are analysed in special laboratories which pass for sale only those which are not prejudicial to public health. The section having jurisdiction over the freezing plants and edible

products factories controls the manufacture as, according to Article 20 of the law in force, no one may alter the mode of procedure prescribed by the Government. The frozen and chilled meat destined for exportation bears an indelible mark on each quarter of beef and on each sheep. The consignments of meat are accompanied by a certificate signed by the general director of the cattle-breeding industry, stating that the exported products have been prepared under the immediate supervision of Government veterinary inspectors.

The cases containing small articles, such as preserved meat or edible fat extracts, bear a seal with the word "Argentina," the number of the establishment of origin, and that of the inspector who examined the product.

In the case of fresh and cured pork products a microscopic examination of the carcase is conducted with a view to the detection of trichina. This service is not adopted in many countries such as the United Kingdom, the United States of America, Australia and others. This fact demonstrates the rigour of the Argentine veterinary inspection, thanks to which foreign countries have the highest guarantee of the quality of Argentine meat.

Between 1922 and 1926 all the veterinary services in Argentina were reorganised, and sections were established with the object of studying foreign markets at the expense of the control department of the meat industry. In 1925 a delegate was sent to London who was commissioned to have the Government informed of all the happenings connected with the meat industry. In March, 1925, the exportation of fats and other products was regulated in such a manner as to be a credit to Argentina.

The inspection law in force in the freezing plants and factories that export meat is called "Ley de Policia Sanitaria Animal 4155."

The veterinary surgeons engaged in the various services in Argentina have professional degrees from the universities of La Plata and Buenos Aires. In 1920 a third veterinary university was founded at Corrientes. The veterinary course takes four years, and students must have previously gone through the studies for the bachelorship. The number of veterinary surgeons in the service is about 1,500.

The courses for the veterinary profession were initiated at La Plata in 1882, the first faculty having been founded in that year. Previous to that date, the veterinary surgeons practising in Argentina were foreigners and were paid by the Government. The three veterinary faculties at present existing are firmly established, and are equipped with large and modern laboratories and staffed with Argentine and foreign professors of recognised ability.

The veterinary assistants in the freezing plants have to pass an examination by the Ministry of Agriculture before they can be appointed to these posts.

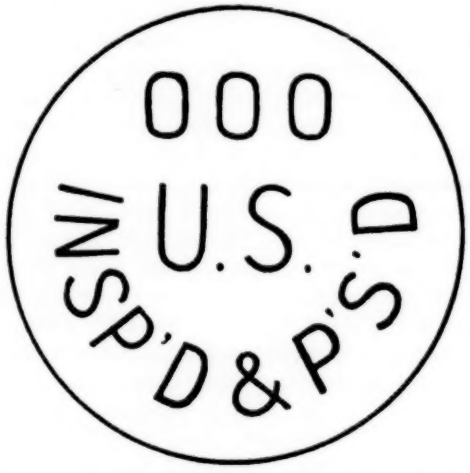
Meat inspected in Argentina bears a stamp on each frozen or chilled quarter of beef or other meat. The stamp in blue ink is affixed to the flank in front of the

(*Continued at foot of next column.*)

The U.S. Inspection Stamp as a Guide to Wholesome Meat.

As the question of meat inspection in the British Isles was dealt with at some length in a recent issue of the *Record*, we think that the following extracts from a popularly-written illustrated pamphlet issued under the above heading by the United States Department of Agriculture (Miscellaneous Circular No. 63) will prove of some interest to our readers:

"A customer sees several cuts of meat on the counter. They have small purple stamps on them—stamps familiar to her, but she has never learned their real meaning.



The "little purple stamp" used for marking carcasses and products that have passed the inspection. The three ciphers occupy the space where the number of the establishment appears.

"'What does that stamp mean and who puts it on the meat? I've often wondered about it,' inquires the housewife of the dealer. In reply, the butcher explains: 'That is the Government meat-inspection mark. It is your assurance that any meat which has that mark came from animals that passed a thorough inspection, given by trained experts. I once worked in a packing house that operated under Government inspection, and I know how strict the regulations are. Only meat that comes from healthy animals and that is clean and wholesome in every way can pass the rigid inspection.'

"'Just what do you mean by inspection?' inquires the customer, still uncertain of its meaning. 'I can see for myself that the meat is all right.'

"'Let me explain how thorough the inspection is,' the dealer continues, 'and then you will understand why just looking at a retail cut of meat tells scarcely anything about its history. The inspection begins with the live animals, before they are driven in for slaughter. There is an inspector in the yards who observes the stock ready for

(*Continued from previous column.*)

scrotum of the hind quarters and to the ribs of the fore quarters. Sheep bear two stamps, one on each side of the linea alba. The inscription on the stamp is "Argentina," together with an appropriate number. Each freezing plant has a number for each inspector, so that by reference to the number on the beef both the company to which it belongs and the inspector who examined it can be traced.

the killing pen. Most animals, of course, are healthy, but if the inspector sees an animal that looks sick or abnormal in any way he tags it with a metal label fastened to the ear. The tag may read either 'U.S. Condemned' or 'U.S. Suspect,' depending on how serious the ailment is; and each tag also has a serial number. If condemned, animals so tagged must not be taken into the slaughter room. Animals whose condition is merely doubtful and which consequently receive only a 'suspect' tag are kept apart and slaughtered separately from other animals. This examination of the live animals is known as the *ante-mortem* inspection.'

"'Next comes the more important, or *post-mortem*, inspection at the time the animals are slaughtered. Every part of each carcase receives a searching examination, especially the internal organs, because any abnormal condition commonly appears there first. Animals with 'suspect' tags get special attention. The Government inspectors who conduct the *post-mortem* examinations do this work in the slaughtering rooms as the animals are being skinned and dressed. Here again the great majority are found to be healthy, but any carcases that the inspectors find that show disease are marked, and then all parts are specially examined by veterinary experts in meat inspection. Any kind of meat inspection in which the inspector does not see the carcases with the organs in place is hardly worth the name of inspection or the confidence of the public.'

"'Some people—probably most people—have heard so much about Federal meat inspection,' the butcher explains, 'that they think all meat receives Federal inspection. But that assumption is much too great. The United States Government has authority only over meats from establishments whose products enter wholly or partly into interstate or foreign commerce. It has nothing to say about meats of establishments which confine their business to the same State where the animals are killed. That is a matter for State supervision. Cities can also supervise meats sold within their limits, just as they inspect local milk supplies.'

"'But so many meat establishments do an interstate business that Federal inspection is the most comprehensive of all and, in recent years, has included about two-thirds of all animals slaughtered in the United States. It is so thorough and so impartially done that officials everywhere—including those of foreign countries—accept United States Government inspected meats without question. But if you see a dressed carcase or any large cuts of such carcases *without* the little round purple stamps you may assume that it is the product of a local slaughtering establishment or was killed on a farm.'

"'The best thing for everybody—farmers, consumers, and the meat trade—would be a well-organised system of inspection in every State that would inspect all meat that doesn't come under Federal authority. The system should be based on the Federal requirements, which are reasonable, though strict, and have stood the test of 20 years. Some cities have meat ordinances patterned after Federal inspection, but they are few compared with the total number.'

. . . . . .

"Pointing to a cut of meat the health commissioner said: 'Here's a piece of United States inspected beef. How thorough was the veterinary examination? I'm on the programme for a scientific talk, and there may be physicians and veterinarians present.'

"'That's steer beef, to get down to details,' the butcher began, 'and since it bears the Federal stamp, it passed all inspections. The steer, of course, first satisfied the *ante-mortem* requirements. It showed no signs of railroad fever, tetanus, or any other serious condition. Otherwise it would have been condemned at once, and instead of its being here you would have had to look for it in a soap factory or fertilizer works.'

"'In the slaughtering room the Government inspector began his *post-mortem* inspection when the skinning of the steer was commenced. The head was the first part removed from the body, and the inspector examined it by cutting open several lymph glands in search of signs of abnormal conditions, such as tuberculosis, lumpy jaw, and abscesses. Then he looked at the tongue, cutting into it if he suspected any abnormal condition. He made deep, slicing cuts into the inner and outer cheek muscles, looking for cysts that might produce tapeworms. And finally he gave the head, as a whole, a thorough examination.'

"'The next inspection which that steer received was of the internal organs, or viscera, which were removed from the carcass in the presence of the inspector and placed before him in clean trucks or on sanitary tables where a good light was available for close scrutiny. The inspector examined the various organs by close observation and touch, cutting into certain ones. The procedure is based on long experience in knowing where diseased or harmful conditions exist.'

"As the butcher paused to wait on a customer, the commissioner viewed the show case of inspected meat with added interest and pictured to himself the inspection service of which he had just heard.

"'I was unaware the inspection was so detailed,' he remarked, after the customer had gone. 'How much more of it is there?'

"'What I have described is only a little more than half,' the butcher continued. 'We'll now get a little closer view of the carcase from which that particular cut you inquired about came. The carcase inspection was the next step after the examination of the viscera. The inspector observed all surfaces and parts of the carcase, looking for nodules on the ribs as signs of tuberculosis. He also observed the membranes of the chest and abdomen, the various groups of lymph glands, the kidneys, split backbone, and body generally, looking for any condition that would indicate unfitness of the carcase for food. An animal found to be free from diseased or doubtful conditions, or which shows only small, localised, inactive lesions that could safely be removed with adjacent parts, is marked 'U.S. Inspected and Passed.' Every important cut of meat of that carcase is then marked with the purple Federal meat-inspection stamp.'

"The commissioner asked: 'What happens to the animals that don't pass inspection? Is there any way to smuggle them out of the back door and sell the meat just the same?'

"The butcher shook his head. 'Not under Federal inspection. It couldn't possibly happen. The packing industry, moreover, knows that Federal inspection is a valuable asset and that failure to comply with all regulations would mean prompt withdrawal of the inspection. That would prevent a packing plant from doing any interstate business. And, besides those reasons, all condemned meat is constantly in charge of the inspectors. In the packing house where I worked there were special rooms and compartments, kept under Federal lock and key. All condemned meats not disposed of at once were kept in those rooms until tanked for fertiliser. It's the same in other places.'

"The commissioner: 'How do you explain this? If meat inspection is such a good thing that you're for it, and the women folks want it, why haven't we had it here in this town long ago? Who would want to oppose it?'

"The dealer replied: 'There are always people on the other side of the fence and a small fighting minority can sometimes stop the most worthy causes. Besides, a good many housewives are not discriminating and don't care whether the meat is inspected or not, so long as the price suits them. Still others let the cook or servants do the marketing and never bother about where the meat comes from.'

"'The farmers also would have various ideas on the subject,' the butcher continued, 'and one has to consider the source of supply. Finally, it's not easy to keep local work of that kind out of politics and on a strictly impersonal basis. If inspection is to amount to anything it must be done by a competent veterinary inspector rather than by an untrained appointee.'

"'That's understood, of course,' the commissioner agreed. 'The same thing was once true of my department, but we have no more trouble from political pressure. The public realises that health work is a professional rather than a political service and has made all its officials see it in the same light. We have the confidence and support of the public, regardless of how the elections go. The same condition would have to apply to meat inspection, of course.'"

Dangerous Drugs.

THE DANGEROUS DRUGS REGULATIONS, 1926,* DATED JULY 29, 1926, MADE BY THE SECRETARY OF STATE UNDER SECTION 7 OF THE DANGEROUS DRUGS ACT, 1920 (10 AND 11 GEO. 5. C. 46).

In pursuance of Section 7 of the Dangerous Drugs Act, 1920, I hereby make the following Regulations amending the Dangerous Drugs Regulations, 1921, (†) hereinafter referred to as the Principal Regulations.

1. Regulation 5 of the Principal Regulations shall be amended and shall take effect as if—

(1) for the words "the total amount of the drug to be supplied on the prescription" were substituted the words "the total amount of the morphine, cocaine, ecgonine or diamorphine or salt thereof, to be supplied on the prescription, except that in the case of a preparation which is contained in the British Pharmacopœia, the British Pharmaceutical Codex or the Drug Tariff issued by the Minister of Health for national health insurance purposes and which is not combined with any other preparation of any of the drugs not so contained, it shall be sufficient to state the total amount of the preparation to be supplied and"

(2) at the end of the first paragraph were inserted the following new paragraph:—

A prescription shall only be given by a duly qualified medical practitioner when required for purposes of medical treatment.

2. Regulation 7 of the Principal Regulations shall be amended and shall take effect as if the following proviso were added to paragraph (*d*) of the Regulation:—

Provided that the last foregoing provision shall not apply to any drug supplied to a person for his use by a medical practitioner or in accordance with a prescription if that person was at the time of the supply in course of receiving treatment from another medical practitioner in respect of addiction to any of the drugs or otherwise, and of being supplied with any of the drugs by or on a prescription given by that last-mentioned practitioner, and did not disclose that fact to the first-mentioned practitioner before the drug was supplied to him.

3. Every duly qualified medical practitioner, registered dentist and registered veterinary surgeon, shall, if not already required to do so in pursuance of Regulation 9 of the Principal Regulations, enter or cause to be entered in a register kept for the sole purpose in respect of each supply of each of the drugs purchased or otherwise obtained by him, the particulars shown in Schedule I (*a*) to the Principal Regulations.

4. If the Secretary of State is of opinion that there is reason to think that a duly qualified medical practitioner may be supplying, administering or prescribing any of the drugs either to or for himself or to or for other persons otherwise than as required for purposes of medical treatment, he may refer the case to a tribunal constituted in the manner described in the Schedule for examination and consideration, and if the tribunal so recommend, the Secretary of State may by notice in the London or Edinburgh Gazette withdraw the authorisation of such practitioner to be in possession of or to supply the drugs and may direct that the exception in Regulation 4 of the Principal Regulations in respect of drugs lawfully dispensed in pursuance of a prescription given by a duly qualified medical practitioner shall not apply in respect of prescriptions given by such practitioner as aforesaid.

5. Regulation 12 of the Principal Regulations shall be amended and shall take effect as if at the end were added the following sentence:—

"Where such person is a duly qualified medical practitioner or registered dentist or registered veterinary surgeon, the Secretary of State may also, by notice given in the like manner, direct that the exception in Regulation 4 of the Principal Regulations in respect of drugs lawfully dispensed in pursuance of a prescription given by a duly qualified medical practitioner or registered dentist or registered veterinary practitioner shall not apply in respect of prescriptions given by such practitioner, dentist or veterinary surgeon as aforesaid."

* Statutory Rules and Orders, 1926, No. 996, H.M. Stationery Office. Price 1d.

† S.R. & O. 1921, No. 865.

6. A medical practitioner, registered dentist or registered veterinary surgeon shall not give any prescription for the supply of any of the drugs, if a direction has been given in pursuance of Regulation 4 or Regulation 5 of these Regulations that the exception in Regulation 4 of the Principal Regulations is not to apply in respect of prescriptions given by such practitioner, dentist or veterinary surgeon.

7. Every person authorised in pursuance of Regulation 10 of the Principal Regulations to carry on the business of manufacturing, selling or distributing the drugs shall keep the same in a locked receptacle of which the key shall be kept by himself or a qualified assistant.

8. These Regulations may be referred to as the Dangerous Drugs Regulations, 1926.

W. JOYNSON HICKS,
One of His Majesty's Principal Secretaries of State.

Home Office,
Whitehall,
29th July, 1926.

SCHEDULE.

Constitution of Tribunal.

England.

The Tribunal shall consist of three duly qualified medical practitioners appointed by the Secretary of State, one of whom shall be nominated by the General Medical Council, one by the Royal College of Physicians of London, and one by the British Medical Association, together with a legal assessor appointed by the Secretary of State.

Scotland.

The Tribunal shall consist of three duly qualified medical practitioners appointed by the Secretary of State, one of whom shall be nominated by the General Medical Council, one by the Royal College of Physicians of Edinburgh, and one by the British Medical Association, together with a legal assessor appointed by the Secretary of State.

FUNERAL OF MR. E. H. LEACH AT NEWMARKET.

The funeral of Mr. Edward Hugh Leach, F.R.C.V.S., of The Chestnuts, Newmarket, took place on Monday, September 6th, at the Newmarket Cemetery. The Rev. W. Colville Wallis, Vicar of St. Agnes', officiated, and there was a very large and representative attendance. Among the immediate mourners were Messrs. Harold Leach, M.R.C.V.S. (son), and Wm. Woods, F.R.C.V.S., of Wigan (cousin). The Newmarket Waterworks Company (of which Mr. Leach was vice-chairman) was represented by Messrs. C. B. Bosworth, J. A. Dawson, D. Gilbert, and J. H. Troughton (directors), and D. H. Lloyd (secretary), and the Electric Light Company, of which he was a director, by Messrs. George Blackwell and T. E. Simpson (directors), R. S. Ruston (secretary) and Frank A. Simpson (engineer). Mr. P. R. Turner, M.R.C.V.S., of Bury St. Edmund's, represented the Eastern Counties Veterinary Medical Association. Many others present included the Hon. George Lambton, Messrs. R. Rimmer, M.R.C.V.S. (Kendal), W. E. Livock, M.R.C.V.S., E. Brayley Reynolds, M.R.C.V.S., V. Pride-Jones, M.R.C.V.S., J. Butters, C. Waugh, W. Halsey, J. Watson, Tom Waugh, Dawson Waugh, Alec Waugh, Hugo Waugh, W. R. Jarvis, Basil Jarvis, Jack Jarvis, Fred Archer, Fred Butters, W. Earl, W. L. Goodwin, C. Marsh, G. Ashby, Major O. E. Griffiths, Mr. C. E. Hammond, J.P., Deputy Chief Constable W. Winter, Dr. J. D. Maund, and Mr. C. W. Marriott (agent to the Jockey Club).

The senders of floral tributes included Mr. G. A. Banham, Mr. and Mrs. Woods, and the President and members of the Eastern Counties Veterinary Medical Association.

The Veterinary Record.

18th September, 1926.

COMPARATIVE MEDICINE.

If the most complete scientific advancement in the large domain of medicine is to be achieved, there can be no question that a combination of those forces which are privileged to practise respective professions in that field is of prime importance. A broadening of the basis for research and enterprise, a widening of the general outlook, and a contact of individual minds with other minds and other ideals are all factors which make for the common good and the higher efficiency of each profession concerned. The Royal Society of Medicine was, therefore, wise and far-seeing when it consented to incorporate in its organisation a Section having as its fundamental objects veterinary association and the discussion reciprocally of animal disease in relation to human ailment. The Comparative Section thus formed, with a Council and Executive half medical and half veterinary, has quite fulfilled the fair promise of success in which it was conceived four years ago, as will be seen from the short report from the Honorary Secretary of the Section published in our columns this week. The Section within itself embodies that principle of combination which the Society has come to recognise as one of its greatest assets and which in its programme of discussions last winter was so markedly illustrated. Indeed, so successful were combined discussions last year that they are to be a prominent feature during the coming session.

The fifth session of the Section opens next month under the presidency of Sir D'Arcy Power, who has ever been a faithful friend and ally to the veterinary profession, and with whom we feel sure our credit stands high. We earnestly hope that even greater support will be given to him than was so wholeheartedly shown to Major Hobday during his highly successful term of office. It is both desired and desirable to draw more veterinarians into the Society as Fellows. Fellowship carries many advantages, apart from the actual attendance at sectional meetings. It affords a touch with medical science so readily helpful to it and to ourselves; the library is the finest of its kind in the Empire, if not in the whole world, and books are available to both town and provincial Fellows on request; references and bibliographies on any medical subject are supplied *gratis* by the library staff.

As showing the extent of the library, it may be mentioned that during the past session 20,380 readers made use of it; 13,359 books were borrowed; and 3,361 parcels of books (eight books may be taken out at a time) were sent to the provinces and abroad. The *Proceedings* are valuable literature, run into 1,232 pages, cost £4,000 per annum, and, as the late President of the Society facetiously remarked, "are big and heavy enough to be used for pressing trousers" if they do not always serve for purposes of reference. The Society's fine building has also many of the amenities of a club, light luncheons and tea being obtainable, and facilities exist for a bath and change from day to evening clothes, which in itself is a great convenience to provincial members on occasion.

Altogether, in Fellowship of the Society and in the closer association with medical science which it conveys, the veterinary profession is vastly aided in the pursuit of the problems of that branch of medicine to which it lays a special claim.

CLINICAL AND CASE REPORTS.

Paralysis in Dogs.

By Henry Gray, M.R.C.V.S.

Old practitioners have learnt wisdom from the bitter experience of the past. Young practitioners have very little experience behind them, so they speculate as to the future and "cockshy" at the wisdom of the ancients.

Paralysis is only a symptom of various pathological conditions of the central and peripheral nervous system and therefore its therapeutical treatment must vary according to its cause or nature.

I am, like a great number of the ancient physicians, a naturalist, and always like to give nature its first chance, and leave it to work out its own salvation. By so doing, 90 per cent. of cases of paralysis in dogs will recover if left alone, and if the practitioner has patience and teaches his client to have patience and not to expect miracles from irrational or meddlesome treatment. Strychnine or electricity does more harm than good, especially if used before nature has had time to bring about recovery. Pressure on the cord from effusion, hæmorrhage or thickening of the meninges (especially of the dura mater), or acute myelitis are rendered hopeless if spinal stimulants are used. They do no good in cases of tumours in the cord or spinal canal, spinal tuberculosis, degenerative lesions in the medulla or in a crushed cord.

They may kill suddenly in any condition from general poisoning or shock. They are only likely to prove of any value in cases of long-standing paralysis of a non-progressive or general type without epileptiform convulsions or cerebro-spinal meningitis following or accompanying distemper. Spinal stimulants in the earlier stages of a disease accompanied by paralysis only add fuel to the fire and often render a curable case incurable. Their use is based more on pharmacological or physiological action than on therapeutical or pathological knowledge.

It is not the function of the practitioner to advise destruction unless the client does not want to go to any expense, has no patience, or the case is hopelessly incurable. I have seen run-over cases of paralysis recover after five of six weeks' expectant treatment, and the majority of cases with accompanying pachymeningitis or spinal neuritis after no other treatment than with analgesics and applications of iodine to the post-dorsal or lumbar regions of the spine. The same may be said of paraplegia pure and simple following distemper.

Progressive general paralysis following distemper—a similar condition to that following syphilis—calls for destruction without any hesitation. But I have had clients who would not listen to destruction but request one to continue treatment until the animal could not raise its head, or move its limbs or body, and lay in that condition for months. If such cases were not carefully nursed they would soon get bed sores. It is surprising how long these cases will linger if forcibly fed and tenderly nursed, for no good purpose but the selfish sentiments of the owner and the increase of the ledger account.

I would, in conclusion, advise all young practitioners to acquire patience and not nervously to expect miracles by the hit or miss or irrational method of their forefathers, or sometimes of their modern teachers. The teaching of one of my ancestors was "when in doubt do nothing beyond the expectant treatment," which, interpreted, meant "leave the case alone and give nature its sway." This teaching was ventured by Hippocrates nearly 3,000 years ago, and yet asses still linger and I suppose always will until the end of creation.

Azoturia: Treatment with Saline and Formalin.

By A. Linton Robertson, M.R.C.V.S., Arbroath.

One evening in the beginning of April I got an urgent message to go and see a horse which was dying, followed by the significant remark that if I did not go at once the horse would be dead before I reached the farm. On arriving at the farm, I found a dairyman's horse lying in a stall in agony. The perspiration was pouring off it and every now and then it would grip the wall with its teeth and remain like that for fully a minute. The temperature was 103·5° F., and the pulse was very much accelerated and weak.

History. The horse belonged to a battery of Field Artillery and had been boarded out to the dairyman for the winter. As the horse was to be recalled shortly, the man put it off work and began to feed it well. On the third day of the animal's idleness the farmer required a bale of hay from a farm five miles distant, and decided to take this horse with a light van for it. The horse covered the first three miles

at a "gentle trot," and then began to show signs of stiffness, so was allowed to finish the journey at the walk. On arriving at the farm, it was put into a stall and given a bran mash, which it took greedily, and appeared all right. About an hour later, when backing the horse out of the stall, it suddenly began to perspire profusely, dropped down, and commenced to knock itself about.

Diagnosis. From first appearances it looked like a case of very acute enteritis or volvulus, but when I heard the history I suspected azoturia. There was no loss of sensation in the hind limbs, as the animal felt a slight pin prick, but close to the tail there seemed to be a slight diminution. As it was dangerous to go up the stall, I had the horse pulled out, and after a few attempts with a pulley attached to the tail it got up, but the fetlocks were so flexed that the front of them rested on the ground. It only remained up long enough to let me feel the gluteal muscles, which were as hard as boards. I was then convinced that it was a case of azoturia. Possibly I should have allowed the horse to lie, but I wanted to get it into a loose box close at hand.

Treatment. I had the horse propped up with bales of straw and passed the stomach tube. I gave 1 oz. formalin, ½ lb. sodium chloride and 1 oz. chloral hydrate in about one gallon of tepid water. I did not have a catheter with me but told the farmer that I would be back first thing in the morning and draw off the urine if necessary. I left instructions to offer a bran mash in a couple of hours' time.

My pleasure and surprise can be imagined when I was met next morning by a smiling farmer, who told me that I had worked a miracle. The horse had got up of its own accord during the night and when seen at 5 a.m. was in a stall eating hay. I moved it back and forward a few times, movements which it accomplished without difficulty. The farmer saw it pass urine about 6 a.m. and said that it was pure black and as thick as soup. He said that it had evidently passed urine before that as the stall was wet. I left a dozen magnesium sulphate and sodium sulphate powders to be given in the food.

Next day the horse was so well that the dairyman wanted to take it home, but I kept it at the farm for a week, giving it a short walk twice daily. A fortnight after this, the horse went back to its military duties, and although it was trotting sound, I noticed, on riding it, that it had a peculiar rolling action behind, but this disappeared in about a week, and the horse did not miss a single parade during the whole training season or camp.

Rapid Onset of Symptoms in Equine Tuberculosis.

By H. C. Rockett, M.R.C.V.S., Salisbury.

The following may be of interest, though not of much actual value.

On July 13th I went to a farm, having been asked by my client to "look in one day when passing, to rasp a horse's teeth." The horse in question was just the usual farm type, about 12 years old, and had been on the place for several years, and had never been treated for anything except a mild attack of colic about three years before. I examined the teeth and finding them rather rough I rasped them and left a few tonic powders, but did not make any particular examination as the only complaint was that the horse had become a little poor and did not get on too well with his food, but was working as usual.

On the evening of August 3rd the owner rang me up and asked me to see the horse again, as it had gone back in condition a good deal, and that evening seemed in a certain amount of pain. He added that he would have sent before, but he knew I was away, so waited until I came back, as I had seen the horse in the first place.

When I saw the patient I was astonished at its condition. It had wasted very badly, and was tucked right up in the flank; in fact, it looked like the picture of a horse suffering from "grass sickness." Respirations were shallow and a little accelerated. Temperature 101·6° F., and the horse kept lifting his head and yawning in a peculiar manner.

I told the owner that I thought it a hopeless case, and that the cause of the trouble was probably tuberculosis or a malignant growth. Being a man who always likes to give things a trial, I agreed to treat the case for two days, so I simply left a little stimulant by way of doing something.

On August 5th the case was much the same, but a little worse and the temperature was 103°. The animal seemed to resent being moved round, and I thought the neck was a little stiff. It was then decided to destroy the horse and this was done.

Post-mortem revealed the following: Heart and lungs apparently normal, except that the former was enlarged, and weighed 14 lbs. The liver shewed some definite lesions which I took to be tuberculous and weighed 43 lbs. The spleen was a mass of yellow material which I also thought to be tuberculous, but it was not caseous and could be cut into pieces that did not break up, and the weight was 23½ lbs.

There were also several tumours in the mesentery, one, about the size of a large orange, being in apposition to the left kidney. I examined scrapings of sections microscopically and found that the condition was tuberculous.

I think the case is rather unusual on account of the rapid onset of symptoms. I was informed that for a couple of months before I saw the horse he did not feed really well in the stable, but when in the field at work he always cleared his nosebag when it was put on, and he did not shew any very marked wasting until ten days before he was destroyed.

Dogs are now borne on the strength of the United States Army. New regulations authorise the use of dogs for various duties, such as pulling sleds across the Northern snows, or acting as messengers to carry relief appeals.—*Reuter.*

ABSTRACT.

("Spondylitis deformans in the Horse." E. JOEST. *Berl. Tier. Wochens.* Vol. 32. No. 31. 30th July, 1926. p. 505).

The observations are based on six cases of the author's and on work done by Vogt. Spondylitis deformans is a disease often seen in middle-aged and old horses, especially riding horses. It is generally confined to individual segments of the spinal column in the dorsal and lumbar portions. There is no apparent spinal curvature. Stiffening of the vertebral column is caused by new bone formation in the vertebra bridging over the vertebral joints, chiefly on their ventral surface, forming a knob or cone-shaped tumour, often the size of a hen's egg. These may be joined to smaller outgrowths of bone, corresponding in position to the middle of the individual vertebra. The newly-formed bone has a smooth surface, and is of spongy, bony tissue with a thin, superficially-thickened layer. In some cases the knobs have an irregular transverse cleft corresponding to the vertebral joint. The two halves show clamp-like exostoses fitting into one another. In most cases the bony structure forms a continuous bridge over the affected sections of the vertebral column. The articulations of the processes may be free, or they may also show osteophytes at their edges and ankylosis.

By compression the intervertebral layers are pushed over the edge of the joint surfaces and project between the vertebra. Elasticity is diminished and consequently the shock-absorbing power is reduced. Laceration of the periosteum and hæmorrhage from the bone take place, followed by ossifying periostitis and formation of exostoses. The longitudinal ligament shares in the ossificatory process, becomes thickened as a result of chronic tendinitis, coloured yellow and often ankylosed. Laceration and hæmorrhage are also demonstrable in this ligament.

Hæmorrhagic petechiæ may be found, under the pleura, in fatty and connective tissue, and in the dorsal part of the intercostal musculature.

The two mechanical causes of spondylitis are vertical pressure on the longitudinal axis and shaking of the vertebral column.

D. K.

The sum of £30,000 comes to the Royal Society for the Prevention of Cruelty to Animals under the will of Miss Lucy Gordon Roberts, of Brockenhurst, Hants. She also bequeathed £1,500 to the People's Dispensary for the Sick Animals of the Poor, London, and £400 to the London Branch of the Dumb Friends League.

Mr. William Thomas, of Merthyr Tydfil, Glamorgan, left nearly all his fortune of £11,985 to Our Dumb Friends League.

TRANSLATION.

Contributions to the Study of Movements in the Isolated Intestine.

By J. KOLDA.

Article I.

In order to observe the mode of action of a series of purgatives ordinarily employed in veterinary practice in the treatment of "colic" in the horse, we have, assisted by collaborators, undertaken researches relative to the action of those purgatives on the movement of the intestine isolated from the horse. Radioscopy, the abdominal window and the method of Baylis and Starling could not, for obvious reasons, be adopted in the horse, there therefore remained only the study of the isolated intestine.

We employed Trendelenburg's[1] method, which shows at the same time the contractions of the longitudinal and circular muscular layers, and in applying this method[2] in the horse we modified it in such a manner as to allow us to observe in detail the different movements.

1. The movements of the longitudinal layers, during which the intestine lengthened and shortened successively.

2. The modifications of volume, due especially to the contracting and relaxing of the circular layer. Trendelenburg terms the movements "peristaltic"; we have been forced to give this term to the two different muscular layers, for the following reasons:

(*a*) In the fresh, normal intestine, to which no active substance has been added, the number of movements (contracting and relaxing) can be different in the same period of time;

(*b*) Certain substances can have an elective action on one or other of those movements; thus, for example, the cardiac tonics affect specially the modifications of volume without exercising any manifest action on the changes in length, while certain bitter substances produce exactly the opposite action.

3. The periodicity of the two movements, which manifests itself in that the phases of increased activity are followed by periods of relative or even absolute repose. (Cheyne-Stokes type.)

4. The modifications of tonus of a portion of the longitudinal layer, especially the curve depicting the longitudinal oscillations, and, on the other hand, of the circular layer (especially the curve depicting the change in volume that we call expulsive movements). The same modifications of tonus (the increase after the use of tonics acting on the vagus, the lowering after the use of atropine) are not produced simultaneously, which is an indirect proof permitting us to attribute those two movements described above to the two different layers.

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[1] Trendelenburg. *Arch. f. exp. Pathol. u. Pharmakol.* 1917. t. lxxxi.

[2] *La Methode Pera décrite en détail dans les Archives Internationales de Pharmacologiè.*

5. Lastly, the method permits the easy application of the substance examined, not only in the conveying liquid but also in the intestine itself. The first mode of application corresponds very nearly to a peritoneal injection, the second to administration by the mouth. This is an important fact which has been, up to the present, too much neglected. In effect, we have observed in the course of our experiences that certain substances act differently according to their mode of application.

We have studied by means of this method the motility of the small intestine of the horse, and the ox, also the large intestine of the cat, and we have observed the following facts :

(i) The small intestine of the horse was removed from the abdominal cavity immediately after slaughter of the animal and transported within an hour from the abattoir to the laboratory in a solution of Tyrode contained in a thermostat heated to 37° C., then placed in a bath of Tyrode contained in a water bath heated to 37° C., and saturated with oxygen. The movements continued from one to three hours and those movements were registered.

The movements of the longitudinal layer continued alternatively. In addition to those, we observed changing of volume due to the contracting and relaxing of the circular layer. The numbers of those two movements were more nearly equal the more feeble they became ; the numbers were equal if the intestine produced only thirty movements in five minutes. Sometimes we observed this equality even if the frequency was greater, thus we observed sixty oscillations (lengthening and shortening), and only forty expulsive movements in five minutes.

The small intestine of the ox effects five deep peristaltic movements in five minutes, both the longitudinal and circular layers being in action. In addition, one observes between the two peristaltic movements about eleven much more superficial oscillations which take place only by an alternative lengthening and shortening of the longitudinal layer.

The large intestine of the cat effects in five minutes six peristaltic movements which are very deep and in which both the longitudinal and circular layers take part. Each of those movements determines the almost complete evacuation of the intestine.

(ii) From the point of view of their fulness and frequency, the movements can be quite regular, but generally they are relative to the periodic speed in which the phases follow one another more or less regularly.

(iii) The tonus has for the motility of the intestine a primary importance according to whether it is too low (normally or under the influence of asphyxia) or too high (normally or under the influence of an elevated temperature). The movements become much more superficial and much slower the more abnormal the tonus. The toxicity can be influenced up to a certain point by the regulation of the internal pressure in the intestine which is produced by the Tyrode liquid by which the intestine was filled.

(iv) The small intestine of the horse and the large intestine of the cat lend themselves to the study of the mode of action of the different substances on the speed of movement, and on the tonus of the isolated intestine, because during the whole time they execute regular movements and their tonus maintains itself constant. The isolated intestine of the ox, on the contrary, fatigues itself too quickly, the tonus becomes modified and the movements cease.

(v) Certain portions of the intestine did not execute any movements, although the conditions of transport, isolation etc., were strictly observed. For the intestine of the horse this faculty of presenting the movements *in vitro* does not depend either on sex or on age ; we have observed that in all there is a direct relationship between this faculty and the anatomical origin of the portion of the intestine under observation. The motility is best observed in the portions taken at three inches from the pylorus, the segments taken nearer often remain without any movements, and in the portions taken from more distant parts the motility is variable.—From *Comptes Rendus des Séances de la Société de Biologie.* No. 22. 1926.

T. D. Y.

REPORT.

Report of the Veterinary Officer of the City and County of Newcastle-on-Tyne for the year 1925.

The duties in connection with the inspection of meat and other foods, livestock markets, lairs, cowsheds, etc., and inspections under the Diseases of Animals Acts are combined in the City and County of Newcastle-on-Tyne under its veterinary officer or inspector. The Health Committee of the Corporation is also the Executive Committee under the Diseases of Animals Acts. It will be agreed that this organisation is eminently satsifactory from the control of animal disease point of view, and in relation to human health.

Three outbreaks of scheduled disease occurred within the city during the year, two being swine fever, after a freedom of five years, and one being a case of anthrax in a bullock sent into the city for disposal. No outbreaks of foot-and-mouth disease have occurred since May, 1924, to guard against which very close supervision has to be maintained of the railway docks within the city, in view of its importance as a redistribution centre and by reason of the Gateshead weekly auction sales. With regard to this disease, the veterinary officer points out the possibility of introduction through the return of crates used in the horse carcase trade (2,244 carcases were exported during the year), and the importation of freshly-killed carcases of veal, pork and mutton direct from continental slaughterhouses. No parasitic mange, nor even a suspected case, was observed and two suspected cases of rabies proved to be unaffected with that disease. The Tuberculosis Order of 1925, which came into operation on 1st September, clearly shows the

necessity for the dual duty of the veterinary inspector as an inspector under the Diseases of Animals Acts, and as a meat and food inspector. Twelve cows were removed from registered cowsheds in the city under the Act as supplying tuberculous milk, and no fewer than 486 animals were found on slaughter to be tuberculous, necessitating the total destruction of 215 and their internal organs. (See Table VII below.) In connection with tuberculosis, it is interesting to note the efforts of the veterinary officer during the past 4½ years to establish a tubercle-free herd at the Slannington Sanatorium for Consumptive Children and Philipson Farm Colony, action which bids fair in the near future to be crowned with success.

Dealing with live stock and meat supplies, the report is instructive in showing the number of food animals (cattle, sheep and pigs) in Great Britain, and Northumberland's resources in that respect. At the beginning of 1925 there were in Great Britain 7,058,726 cattle, 21,729,347 sheep, and 3,427,166 pigs, an increase of 792,917 (or 30 per cent.) pigs, but a decrease of 34,000 cattle and 2½ millions sheep since pre-war times (1914) notwithstanding the increase of the population of Great Britain from 41,846,000 in 1914 to 43,956,000 in 1925 (over two millions). Of the number, Northumberland in 1924 had 136,343 cattle and 1,075,900 sheep, an increase of approximately 11,000 cattle, but a decrease of 28,000 sheep since 1914 in this, the greatest sheep breeding county in Great Britain. On the other hand, there has been an increase in Great Britain of imported meat, including bacon, hams, etc., from 23 million cwts. in 1914 to 29 million cwts. in 1925, and an increase of the importation of live stock from countries other than Ireland from 2,234 in 1914 to 81,754 in 1925. Table V of the Report, shewing the number of animals exhibited within the Newcastle-on-Tyne cattle market, an extract of which is given below, would appear to reflect a relative decline of the live stock industry of the country generally, even if allowance is made for an increase of market centres :

NEWCASTLE CATTLE MARKET.

Year	Cattle	Calves	Sheep	Swine	Dairy Cows
1887	110,074	8,780	325,473	28,964	—
1914	55,617	4,376	258,926	26,507	—
1925	31,397	1,394	135,468	3,302	512

Vessels to the number ot 217 arrived at the port with foodstuffs during the year, of which 96 were from Denmark, 71 from Holland, 8 from Norway, 5 from America, 31 from Canada, and 6 from Australia. An idea of the importations may be gathered from the following chief articles : 5,855 fresh pork carcases, 1,187 fresh veal carcases, 32,236 frozen carcases of mutton, 18,484 frozen carcases of lamb, 28,655 frozen quarters beef, 8,820 frozen packages boneless beef, 52,657 American bacon and hams, 547,237 sides Danish bacon, 22,299 tinned meats, and a considerable number of packages of offal.

Of animals slaughtered in licensed premises within the city the following are recorded for 1925 (Table VI) :

Horses		2,244	
Cows	795		An increase since 1921 (129,862 animals).
Heifers	10,403	18,486	
Bulls	304		
Bullocks ...	6,984		
Calves		3,763	Varying in respect to classes of animals slaughtered.
Sheep		94,950	
Pigs		36,021	
Total animals ...		155,464	

As previously remarked, tuberculosis formed the chief reason for condemnation. The Table (No. VII of Report) reproduced at the end of this notice shews the degree to which this disease existed. (N.B.—No tuberculosis in sheep, one tuberculous liver and two lungs in horses.)

Other prominent reasons for condemnation were decomposition, both in carcases and organs, swine fever, imperfect bleeding, emaciation, septicæmia, pneumonia (pigs' lungs), distomatosis (livers, ox), parasites (lungs, sheep and ox).

The total weight of meat and other foodstuffs condemned amounted to nearly 68 tons.

As many as 17,834 visits were made to slaughterhouses, 2,994 to wholesale meat shops, 777 to retail meat shops, 407 to wharves and vessels, and 952 to central markets of meat, provisions, fruit, vegetables, and fish. The total visits and inspections of live stock premises, *i.e.*, cattle lairs, pig lairs, railway cattle docks, cattle markets, cowsheds, etc., amounted to 2,741.

Cattle, Calves and Pigs slaughtered within the City.		Number of animals found diseased, unsound or otherwise unfit for human consumption.		*Number of animals found tuberculous.	
		Whole carcases condemned	Parts or organs condemned	Whole carcases condemned	Parts or organs condemned
Year 1925		Year 1925			
Cows ...	795	74	49	62	43
Heifers ...	10,403	51	62	44	41
Bulls ...	304	...	7	...	7
Bullocks ...	6,984	32	55	24	27
Totals ...	18,486	157	173	130	118
Calves ...	4,348	49	...	3	...
Pigs ...	51,284	159	257	82	153

* The figures representing the numbers of animals found tuberculous on slaughter do not necessarily indicate the total number of animals affected with disease, because under the present slaughterhouse system it is impossible to guarantee that all those slaughtered are subjected to inspection.

J. M.

DIVISIONAL REPORTS.

Royal Counties' Division.

A Day with the President at Watford.

The President of the Royal Counties' Division, Mr. F. T. Trewin, ably seconded by Mrs. Trewin, very generously made himself entirely responsible for the entertainment of those attending the summer meeting of this Division, which was of a social character, and which was held at Watford on Friday, August 13th. Inclement weather did its untimely best to spoil the attractive programme, but it did not materially affect the size of the company of members and guests or interfere in any way with their enjoyment of a very happy afternoon.

In addition to the President and Mrs. Trewin, the following members and their ladies were present: Major Catmur (Hon Secretary) and Mrs. Catmur, Captain and Mrs. Collett, Major and Mrs. Dunkin, Mr. and Miss Lepper, Mr. and Mrs. Male, Mr. and Mrs. McIntosh, Colonel and Mrs. Simpson, Mr. Sydney Slocock, Major S. L. Slocock, Mr. and Mrs. F. W. Willett, Mr. and Miss J. Willett, and Professor and Mrs. Wooldridge.

The President's list of private guests was as follows: Miss Ailward; Mr. Barr, M.R.C.V.S. and Mrs. Barr; Miss Bourne; Miss Dickens; Mr. and Mrs. Dinnis; Mr. Gale, M.R.C.V.S.; Mr. Godfrey, M.R.C.V.S.; Dr. and Mrs. Hall; Mr. Hainwick; Miss Lailey; Mrs. Minett; Miss Peake; Mrs. Pearkes; Mr. and Mrs. H. Trewin; Mrs. Ward and Miss Villar.

Apologies for unavoidable absence were received from Mr. Addis, Lieut.-Col. Baldrey, Major Barron, Messrs. Baxter, Bullen, Coleman (J. C.), Coleman (I. R.), Gill, Colonel Jelbart, Major Hobday, Messrs. Knight, Little and McGing, Major Rees-Mogg and Captain Reynolds.

The company gathered in a large and tastefully decorated marquee on the lawn of the President's residence, where a truly appetising lunch was served. At its conclusion, a short business meeting was held, with the President in the Chair. Following the approval of the minutes of the previous meeting, Mr. Trewin made feeling reference to the loss sustained by the profession and, indeed, the country, in the death of Sir Stewart Stockman. For a great number of years, said the President, Sir Stewart had held the highest position in the State in connection with the veterinary profession, a post which he filled with great distinction. He was, as they knew, an Honorary Associate of the Royal Counties' Division, which he was always pleased to assist both by attendance at their meetings and by inviting the Division to the Laboratory of the Ministry, of which he was chief; in fact, their last meeting was held there, and his death shortly after came as a great shock to them all. Mr. Trewin moved that a vote of sympathy be passed with Lady Stockman and family. He would mention that the Hon. Secretary had written a letter on behalf of the Division, expressing their sympathy to Lady Stockman.

The vote was carried in silence, the members standing, and the Hon. Secretary then read the letter of grateful acknowledgment which he had received from Lady Stockman in reply to his own.

A letter was read from the Secretary of the N.V.M.A. saying that the resolution received from the Division concerning the notification of veterinary inspectors and other veterinary surgeons of the occurrence of outbreaks of foot-and-mouth disease in their districts and in adjacent districts had been carefully considered by the Veterinary Inspectors' Committee. This Committee had approached the Ministry of Agriculture and Fisheries with the suggestions that either arrangements should be made with local authorities for such notifications to be sent by them to the veterinary inspectors concerned, or that the Ministry should themselves send them direct to veterinary inspectors holding appointments under the Diseases of Animals Acts. The Ministry had pointed out that it was the duty of local authorities and not that of the central organisation to supply these reports to their veterinary inspectors on request and the Committee had therefore decided to insert a notice in *The Veterinary Record* advising all veterinary inspectors holding appointments under the Diseases of Animals Acts to approach their local authorities with the request that they should be supplied with copies of such reports as were issued. It was hoped that members of the Royal Counties' Division would act on this suggestion.

It was agreed to recommend all members of the Division affected to adopt the suggestion contained in the letter from the "National," but to inform the Secretary of the "National," that the Division was entirely dissatisfied with the reply which the parent body had received from the Ministry in response to its representations on the subject.

It was decided that the next meeting of the Division, to be held on the last Friday in November, should take place in London.

The Hon. Secretary proposed the election as a member of Mr. C. J. N. Godfrey, recently appointed Chief Veterinary Officer to the City of Oxford. The President seconded and the proposition was carried unanimously.

Professor Wooldridge said he was sure the members would not like to proceed on the trip which had been arranged for them without expressing, at that stage, their heartiest thanks to the President for the very great hospitality and the kindly reception which he and Mrs. Trewin had given them that day. (Applause.)

The President, in acknowledging the warmly-accorded vote of thanks, said that it gave Mrs. Trewin and himself the keenest pleasure to have the company of the members of the Royal Counties' Division and their ladies. They had only one regret and that was that, on the occasion of this, their Summer Outing, the weather was so disagreeable. He wished to take that opportunity— as he was sure all present did also—

of congratulating Professor Wooldridge on his recent honour, that of his election to the Presidency of the National Veterinary Medical Association. It was an honour which was thoroughly well earned. (Applause.)

Professor WOOLDRIDGE expressed his appreciation of the reference made by the President to what he himself indeed felt to be the very high honour conferred upon him at Dublin, and also of the way in which that reference had been received by the meeting. He asked, with confidence, for their enthusiastic support in every possible way, not only in connection with the climax of his year of office, which would take place at Torquay, but throughout the intervening period. (Applause.)

The ladies having rejoined the company, the party shortly proceeded to board the chars-a-banc which were in readiness to take them on the drive which had been arranged as the entertainment for the afternoon. The conditions improved sufficiently to render the drive devoid of any discomfort and to enable everyone to appreciate to the full the delights of the Hertfordshire countryside *en route* to one of the most beautiful "show places" of England, Ashridge Park, so recently acquired by the National Trust, together with another noteworthy Trust acquisition in the broad, bracken-covered acres of Ivinghoe Common. The grand beech avenues and the noble mansion to which they led were much admired, while from the heights of the Common all revelled in the glorious views across to the Aylesbury country on the one hand and to Dunstable Downs on the other.

As a variation from the outward route *via* Hemel Hempstead, return was made through Berkhamstead —an equally charming journey—and the festive gathering ended, as it commenced, in the marquee on the lawn of "The Cottage," where the President's hospitality was again enjoyed, this time at the tea tables.

R. CATMUR,
Hon. Secretary.

North Midland Division.

SUMMER MEETING.

The Summer Meeting of this Division, which was held on August 31st, took the form of a trip to Worksop and the Dukeries. The members of the Division from Sheffield and Barnsley went by char-a-banc to Worksop and joined the other members arriving at Worksop at a luncheon held at the Lion Hotel and kindly provided by the President, Mr. C. Secker Smith, and Mrs. Smith. The following were present: Mr. and Mrs. Smith, Miss Miller, C. S. Smith, Jr. and B. Bartram Smith; Mr. and Miss Robinson; Mr. C. O. Johnson, Miss Johnson, Miss Wood and Mr. C. Carter, Jr.; Mr. E. F. Angler, Mr. J. S. S. Woodrow, Miss Woodrow and Miss England; Mr. R. Hudson and Mrs. Hudson; Mr. F. C. Scott and Miss Betty Scott; Mr. T. Ludlow; Mr. G. Green and Mrs. Green; Mrs. Bowett; Mr. T. C. Fletcher and Mrs. Lievesley; Mr. S. E. Sampson, Mrs. Sampson, Miss Sampson and Mr. G. Sampson; Mr. H. Thompson and Mrs. Thompson; Mr. S. H. Nixon and Mrs. Nixon; Mr. S. G. Abbott; Mr. W. Tweed; Mr. J. S. Lloyd, Miss Lloyd and Mr. T. E. Felton.

Apologies for inability to be present were received from Major Abson, Mr. Jones, Mr. Murgatroyd, Mr. Wheatcroft, Captain Johnson, Mr. Furness; Mr. Bowett was unable to be present owing to a sudden attack of illness and an apology on his behalf was tendered by Mrs. Bowett. Before separating, a very hearty vote of thanks was, on the call of the Hon. Secretary, passed to Mr. and Mrs. Smith for their kindness and hospitality. Mr. Smith suitably replied.

Following the luncheon, a short business meeting was held, Mr. Smith, the President, occupying the Chair. The minutes of the last meeting, which had been published in the *Veterinary Record*, were taken as read and were signed by the Chairman as correct. The minutes of the last Council meeting were also read. The HON. SECRETARY read correspondence with Mr. S. C. Smith, District Manager of the Post Office Telephones, Sheffield, in regard to emergency service for the quick repairs of breakdowns in telephones belonging to veterinary surgeons who are members of the Association, and quoted a letter dated February 18th, stating that instructions had been issued accordingly. The following new members were elected: Mr. S. G. Abbott, Sheffield; Mr. J. R. Hudson, Retford; Mr. W. Tweed, Sheffield and Mr. J. S. S. Woodrow, Goole.

After the meeting the party were conveyed by char-a-banc to the premises of Captain Foljambe, Osberton Hall, where they were met by the steward, Mr. G. S. Roedewer, who kindly showed them over the new modern cowsheds fitted with the latest appliances for tying and watering cattle and dealing in a cleanly way with the cattle and the milk produced by them. The herd consists of about 70 head of pedigree Jersey cattle, 31 of which are in milk at the present time.

Both the herd of cows and the stock bulls, three in number, were much admired, and the special precautions taken to ensure a pure milk supply were found very interesting. The dairy itself is divided into three parts, one for washing and sterilising the milk vessels, the second part for collecting the milk, from which it is passed into the third part through a pipe in the wall to be cooled and placed in the churns ready for conveyance to Worksop town. Only one attendant is allowed into the latter compartment and he has to wear waterproof overalls and rubber boots. The party were next shown through the gardens and later inspected a flock of pedigree Southdown sheep. Upon the proposition of Mr. FLETCHER, a very hearty vote of thanks was passed to Captain Foljambe for his kindness in allowing the party to inspect the premises, herd and flock.

The party then proceeded by char-a-banc to Welbeck, the seat of the Duke of Portland, where the guide conducted them through the underground passages to the picture gallery and ball room. Amongst matters of interest, in addition to the beautiful pictures, were the skins of St. Simon, Ayrshire and Donovan, which had been cured and hung in full length glass cupboards on the wall. Following this inspection, the party were next shown through the gardens and later the

sunk garden which was presented to the Duke and Duchess in celebration of their silver wedding by 1,500 Nottingham women. A visit to the riding school completed matters of interest seen at Welbeck.

The party then took char-a-banc to Lodge Farm, Worksop, the residence of Mr. T. Bowett, M.R.C.V.S., and Mrs. Bowett. Upon arrival there the party were pleased to be welcomed by Mr. Bowett, who had received permission from his doctor to leave his bed for the purpose, a fact which was particularly welcome to the visitors, who had some little diffidence in accepting Mr. and Mrs. Bowett's welcome and hospitality under rather trying circumstances. At Lodge Farm the party were provided with tea and spent a couple of very pleasant hours. Unfortunately, the rain, which had been threatening all day, now began to fall and prevented the party from inspecting the buildings, stackyard, etc., of a large farm. Following tea, a very hearty vote of thanks was, on the proposition of Mr. GREEN, passed to Mr. and Mrs. Bowett for their hospitality. In reply, Mrs. Bowett stated that she would not allow her husband to make a speech, and both on his behalf and on her own she was pleased to welcome the members present and hoped to see them on some future occasion. The return journey was then made to Worksop town, where the various members proceeded to their respective homes, the visitors from Sheffield and Barnsley travelling on to Sheffield by char-a-banc.

J. S. LLOYD,
Hon. Secretary.

Country's "Record" Number of Cattle.

The recently-issued agricultural returns for June reveal the interesting fact that the country is now credited with the largest number of cattle ever recorded. The following is an abstract of the Ministry of Agriculture's statement:—

"For the fifth year in succession the number of cattle shows an increase, and the total this year, 6,252,400, is the largest ever recorded. Since 1921 the herds of the country have been increased by 736,000, the addition during the past year being 89,000. The six northern counties have fewer cattle than in 1925, and several Welsh counties also show decreases, but otherwise practically every county has added to its herds. Cows and heifers in-milk or in-calf number 2,748,900, or 35,800 more than the record number to that date of 1925. Increases are greatest in the south and south-west, but Norfolk and Essex have additions of over 2,000. The increase in calving heifers is relatively greater than in cows, and the number of heifers in-calf is the largest on record. The number of cattle above two years old is rather smaller than in 1925, but there are increases in the number of cattle from one to two years old, and also in those under one year old. There are more young stock under a year old on the farms than in any pre-war year.

	1926. No.	1925. No.	Increase or Decrease. No.	%
Cows and Heifers in Milk	2,064,900	2,035,000	+29,900	+1·5
Cows in Calf, but not in Milk ...	294,500	299,700	−5,200	−1·7
Heifers in Calf ...	389,500	378,400	+11,100	+2·9
Other Cattle—				
Two years and above ...	1,053,000	1,060,900	−7,900	−0·7
One year and under two ...	1,221,100	1,177,700	+43,400	+3·7
Under one year...	1,229,400	1,211,600	+17,800	+1·5
Total of Cattle ...	6,252,400	6,163,300	+89,100	+1·4

More Sheep.

A further good increase is recorded in the flocks, the total number of sheep and lambs being 16,859,000, or 884,000 more than on June 4, 1925. The rate of increase was rather slower than in the previous two years, but the flocks have been increased by 3,421,000, or over 25 per cent., in four years, and are now only 400,000, or less than 2½ per cent., smaller than in 1914. Increases are general throughout the country, very few counties showing reductions. The number of breeding ewes was returned at 6,752,000, an increase of 355,000 on the year, while the increase in lambs was relatively greater, there being 7,202,000 lambs, or an increase of about 497,000. The increase in yearling sheep, other than breeding ewes, was quite small.

	1926. No.	1925. No.	Increase. No.	%
Ewes kept for Breeding ...	6,752,300	6,397,100	+355,200	+5·6
Other Sheep—				
One year and above ...	2,904,500	2,872,300	+32,200	+1·1
Under one year...	7,202,100	6,705,400	+496,700	+7·4
Total of Sheep ...	16,858,900	15,974,800	+884,100	+5·5

Large Decline in Pigs.

The number of pigs on agricultural holdings shows a further decline this year to 2,200,000, but the reduction is relatively smaller in the case of breeding sows than in other pigs, an evidence that farmers had begun to keep on more gilts for breeding than was the case a few months before the date of the census. Practically every county shares in the reduction in the number of pigs, but the decreases are relatively smaller in the North and in Wales than elsewhere, and in these areas the number of breeding sows shows a small increase.

	1926. No.	1925. No.	Decrease. No.	%
Sows kept for Breeding ...	301,100	316,500	−15,400	−4·9
Other Pigs ...	1,899,100	2,327,900	−428,800	−18·4
Total of Pigs ...	2,200,200	2,644,400	−444,200	−16·8

Horses Again Fewer.

The number of horses on agricultural holdings is again reduced, but it is satisfactory to note that the decline in breeding has not been so rapid as in the past few years. The number of foals, does, however, show an appreciable decrease, the total of 41,000 being 3,900 less than in 1925. The reductions in the previous three years were much larger, being 10,000, 11,500 and 17,500 respectively. Horses used for agricultural purposes number 760,500, or 12,700 less than last year, and 31,000 less than in 1914. The increase in the number of "Other Horses" is due to a number of pit ponies, which would not normally be included in the returns, being on farms.

	1926. No.	1925. No.	Increase or Decrease. No.	%
Horses used for Agricultural purposes (including Mares for Breeding)	760,500	773,200	−12,700	−1·6
Unbroken Horses (including Stallions)				
One year and above ...	125,500	148,500	−23,000	−15·5
Under one year...	41,000	44,900	−3,900	−8·7
Other Horses ...	201,700	197,600	+4,100	+2·1
Total of Horses ...	1,128,700	1,164,200	−35,500	−3·0

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Foot-and-Mouth Disease.

RESTRICTIONS IMPOSED IN WIDE AREA.

The exposure of infected pigs in Shrewsbury Market may cause widespread infection, in view of the fact that large numbers of stock have been distributed to Western Midlands and certain Welsh counties. As a precautionary measure the Ministry has applied by Order, taking immediate effect, provisions of Infected Areas Restrictions Order of 1925 to the following wide area :—

The counties, including all county and other boroughs geographically situated therein, of Hereford, Worcester, Warwick, Stafford, Salop, Montgomery, Radnor, Denbigh, Flint, Chester and Lancashire, except the county borough of Barrow-in-Furness, the boroughs of Morecambe and Lancaster, and the petty sessional divisions of Garstang, South Lonsdale, Hornby, North Lonsdale and Hawkshead.

. . . . . .

Owing to the greater part of Lancashire having become a scheduled area through an outbreak of foot-and-mouth disease in pigs at Liverpool abattoir, Manchester pig market was not held on Monday. Salford cattle market was held as usual, but the restrictions largely reduced the number of animals sent.

The Liverpool Fire Brigade took their pumping appliances and hose to the abattoir and pumped carbolic-acid disinfectant into it for five hours. The abattoir was saturated from floor to rafters. The Foot-and-Mouth Disease Order embargo was afterwards lifted and, an all-clear certificate having been given, the market was re-opened for dead meat. Carcasses of cattle slaughtered elsewhere arrived in large consignments and the meat supply was well maintained.

. . . . . .

There is some concern for the health of French cattle, because of the alarming spread of foot-and-mouth disease. It is reported that this malady is rampant in no fewer than sixty-seven departments, including the rich provinces of Normandy, Burgundy, the Jura, Charolais and Alsace. The question is asked whether Parliament will occupy itself in modifying the " rural code " which has been in operation since 1791. This code sets forth the precautions that had to be taken against the contagious maladies from which animals suffer. The afflicted animals had to be isolated and marked, and it was forbidden to introduce in barns animals liable to contract the disease. It is now felt that these precautions are not sufficient, that breeders do not take them or adopt them too late to be efficacious.

While the condition of the French Budget makes it impossible for the methods adopted in England and Switzerland to be imitated, it is considered highly necessary that more vigorous measures should be taken against foot-and-mouth disease. There exists in each department an official responsible for rural hygiene. He is called a director, and it is hinted that half the number of these officials are to be suppressed. There is great opposition against this proposed economy, which is held to be inopportune at a time when the national herd is in danger.—*The Times.*

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Appointment of Veterinary Inspectors under the Milk and Dairies (Scotland) Act, 1914.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—In the *Veterinary Record* of August 21st, 1926, there is reproduced a letter from the Scottish Board of Health to the N.V.M.A., explaining the attitude of the Board towards the appointment of Veterinary Inspectors under the Milk and Dairies (Scotland) Act, 1914. The explanation is considered so satisfactory, that the Council of the " National," at their meeting in Dublin on 26th July, decided to take no further action in the matter, and editorial comment in your columns points to it as evidence of the work done by the " National " to protect the interests of private practitioners in Scotland. This satisfaction will not be shared by those part-time inspectors who are faced with the alternatives of yielding either their public appointments or part of their private practices. Early in July I wrote to the " National," at the request of the Secretary, giving the views of Scottish part-time inspectors on the Board's communication, and while I do not suggest that my letter might have been printed along with that from the Board, I do claim that it dealt with the Board's arguments fairly and in detail. To avoid repetition, therefore, I shall confine myself for the present to one point, the restriction of private practice imposed by the Board on part-time inspectors in burghs.

Where in their letter the Board state that they have already given their consent to part-time appointments in twenty-eight burghs, it should be clearly understood that in practically every case the inspector has had to give a written undertaking to refrain from practising among the owners of dairy cows within the burgh, and when they say that they have not yet had occasion definitely to decline to approve a single part-time appointment, it only means that where that undertaking has not yet been given, approval of the appointment has been withheld, though not yet finally refused. My own position illustrates this. Nearly a year ago I was appointed part-time inspector under the Act by the Local Authority, but as I have not so far given the required undertaking, the Board have withheld approval of my appointment. In my burgh there are a part-time town clerk, a part-time procurator fiscal, a part-time medical officer, and a part-time veterinary officer. All these gentlemen may practise their professions with impunity, except the veterinary officer, who (for his own good, I gather) has to be restricted to a sphere where he will be led not into temptation. I have already been offered the Board's alternatives by the part-time town clerk, himself a solicitor, with full liberty to practise. If I decline to give the required undertaking the same part-time official will, as things stand, sign my letter of dismissal. If I consent, the position is not less humiliating. In sickness, I or my family may be attended by the part-time medical officer. The part-time procurator-fiscal happens to be my own legal adviser. But if it chanced that one of these officials, for pleasure or profit, ran a dairy farm, I might not so much as attend to his cow in travail. It is not only insulting, it is absurd ; not only absurd, but grotesque. That the Council of the " National " should regard it as satisfactory is incomprehensible.

In consenting to part-time appointments with the restriction to practise, the Board have undoubtedly made some little concession, embarrassing though it is. Your leading article misleads, however, in suggesting that that concession was obtained by the " National." The concession was made by the Board on 13th November last, in response to a deputation from the Convention of Royal Burghs, whereas the " National " only took the matter seriously in hand at the meeting of Council on 6th January of this year. Your report of the meeting (*Veterinary Record*, January 30th) shows that the Council strongly resented the differential treatment accorded to veterinary part-time officials as compared with members of the other professions, and a deputation was appointed to re-open the subject with the Scottish Board of Health. Instead of receiving the deputation, the Board sent to the " National " the letter which you have published, and though the situation itself remained practically unchanged, receipt of that letter changed the Council's views. That result seems to be a greater tribute to the eloquence of the Scottish Board of Health than to the perspicacity of the Council, N.V.M.A.—I am, Yours faithfully, DONALD CAMPBELL, M.R.C.V.S.

35 Calderwood Road, Rutherglen, 11*th September*, 1926.